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For quick, money-saving make-up

without damage to rod thread couplings

new BJ Power Sucker Rod Tong

Hydraulic or air powered for faster, safer, more uniform make-up and break-out of sucker rods and macaroni tubing, without damage to thread couplings. Delivers up to 1,100 foot-pounds torque. Power tong has clean, functional design for balanced weight distribution and easy handling by one man. A single master control handles both speed and direction of rotation. Tandem control feature allows operation from either right or left hand position, or from the front.

For quick on-and-off action, a new "swinging door" gate eliminates hand latching. A single unitized jaw assembly fits ⅝", ¾" and ⅞" rod sizes without change... allows fast, unitized jaw change for other rod sizes from ½" to 1⅛" and for macaroni tubing. Tool is equipped with torque gage control for safe, uniform make-up.

ABOVE: Old-fashioned hand methods are slow and hard... can also damage rod thread couplings.

LEFT: New BJ Power Sucker Rod Tong does the job quick, safe and sure!

Operating Ratings for BJ Power Sucker Rod Tong			
MAX. TORQUE	MAX. SPEED	POWER REQUIREMENTS	
		0-1,000 psi	1,000-2,000 psi
1,100 ft/lbs	141 rpm	30 gpm	15 gpm
1,100 ft/lbs	117 rpm	25 gpm	12 gpm

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Standard Oil Company of California

WESTERN ENTERPRISE IN ACTION

By Richard Sneddon

Size and Success

There is a peculiar belief among extremists that wickedness of some sort is an inevitable consequence of growth in what they choose to call "big business." This is the most illogical kind of prattle because in actuality the rate of institutional expansion is normally in direct proportion to the degree of usefulness that the institution attains. Success is a universal goal but it is an amusing perversion of human nature that we who have tried and failed are the relentless critics of they who have tried and succeeded. Plants sprout, blossom, seed, and multiply only in the proper climate and with the right soil nutrients, and that is pretty much the way it is with business.

R. G. FOLLIS, chairman of the board, Standard Oil Company of California, was graduated from Princeton with a major in physics and geology. Joined Standard in 1924 and became president in 1945. Especially interested in research, also has extensive background of refinery and manufacturing experience and is fully informed on all phases of operation. He is a director of the American Petroleum Institute; vice chairman of the National Petroleum Council; and is recognized internationally as an authority in the broad field of world petroleum economics. Quiet spoken, with a friendly and decisive manner, he is highly respected and well liked by his colleagues within the industry.

In a favorable atmosphere and with adequate stimulation and support, any organization grows. Public approval provides the climate; public patronage is the nutrient; and with these in requisite measure any business must grow—it has no alternative. This is good, for after all the function of business is to serve society. The better it serves society, the more it grows. Returning to the botanical simile, when a potted plant reaches the stage of development at which it can no longer be contained, there is no recourse but to transfer it to a bigger pot, perhaps even to a number of pots. Successful business, as we shall see, is eventually faced with almost the same problem, and resolves it by a very similar process.

Growth Fundamentals

So involved and so diverse are the ramifications of petroleum operation in these modern times that to depict the current institutional structure of a large organization such as Standard Oil Company of California with brevity, continuity and clarity is almost impossible. As the process of expan-

T. S. PETERSEN, president and director of Standard Oil Company of California. Born Logan, Utah. Started with the Company 37 years ago as a service station salesman. Rose via the marketing and merchandising route to the presidency in 1948. A gentleman of obvious stature, with a warm, friendly personality and a substantial reservoir of interesting information on a wide variety of subjects, especially oil. An excellent host with an unusual flair for putting his guests at ease. In all respects, indeed, one of the petroleum industry's outstanding executives.

sion has been accelerated by time and circumstance, it has resembled another interesting form of propagation, called "sporing." In the right environment, certain organisms develop just so far in physical character and dimension, then they spore. That is, one divides into two, two into four, four into eight, and so on *ad infinitum* until the parent is totally lost in the multiplicity of its progeny.

It would seem, however, that in the evolution of any substantial oil organization during the past century, there have been five more or less recognizable growth phases or factors, as follows:

1. An initial striving for completeness.
2. Concentration on the perfection of more effective and more efficient operational techniques.
3. Meeting expanded social and industrial needs attributable to population increases.
4. Greater emphasis on research, the all time champion promoter of business growth.
5. New territorial interests; new commodity development; and the ultimate need for decentralization.

Pioneering Effort

Before Demetrius Scofield and Alex Mentry began their pioneer adventurings in Pico Canyon in 1875, they were already fully apprised of the essentials of success in oil operation. These were men of prior experience in the still young and brash industry. They knew that petroleum in the raw had limited application but they saw in it tremendous potential. Its segregation into fuels and lubricants of a sort had already been demonstrated, and they were quite convinced that the ideal organizational set-up was one that combined production, refining, and marketing in a single entity.

As soon, therefore, as they had acquired some production, they took the obvious next step and built what is believed to be California's first oil refinery at Newhall. Meantime, by way of assuring sufficient funds for their projected program, they solicited the aid of a group of San Francisco financiers and formed the California Star Oil Works which in 1879 was merged into Pacific Coast Oil Company.

Early Strivings

In the next two decades, the assets of Pacific Coast Oil Company increased manifold. The firm had purchased and leased much valuable acreage and drilling operations were meeting with pronounced success. (It is amazing, really, that these pioneer operators did such a fine job of land acquisition without benefit of geoscientific advice.) A much larger refinery had been built at Ventura, and all that was lacking was a marketing and merchandising machine to cultivate profitable outlets for the refined products.

Just at the psychological moment along came Standard Oil Company with an already well established west coast marketing organization. It was just a matter of time until there would be a melding of the two units to achieve that initial stage of growth which we have termed institutional "completeness."

That briefly is how it all began and since this is not a history we shall try henceforward to skip non-significant dates and dry parchmented data, and depict the growth story in terms of the rational processes by which it came about. The first few paragraphs should illustrate, however, the quite natural inclination of people and firms with complementary interests and activities to migrate to a common pole like electrically charged particles, and come together in a cohesive and effective whole.

It was exactly in this way that what we now call Standard Oil Company of California attained its first institutional form, and it will be found upon examination that all subsequent enlargements and extensions were the result of similarly normal trends and similarly logical planning.

Widening Horizons

Dissatisfaction with existing systems and practices is a prime stimulator of modifications and improvements that lead ultimately to a greater variety of operations, products and services, and hence to a widened scope of product application. Following every oil discovery, beginning with the first,

GLEN M. FOSTER, secretary of Standard Oil Company of California, was elected to that post in 1947. He was born in Echo, Minnesota, moved to California at an early age, and received his education in Hollister, Petaluma, and San Francisco schools. He was first employed by the Company in 1914 as a steno in the tax department. Meantime he was studying law and in 1919 passed the California bar examination. Five years later he was transferred to the office of the secretary and in 1931 was elected assistant secretary. Having completed almost 46 years with Standard he is a well known citizen of San Francisco.

GEORGE L. PARKHURST, vice president and director of Standard Oil Company of California, in charge of Middle Eastern operations, joined Standard in 1945 as vice president of Oronite Chemical Company and the following year became its president. He is a native of Evanston, Illinois; was graduated from Illinois Institute of Technology with a B.S. in engineering; studied law at Northwestern and De Pauw Universities; and took graduate work in chemistry at University of Chicago. Although now responsible for Middle Eastern activities, he still retains a lively interest in the Company's chemical developments.

came efforts to invest oil finding methods with a greater degree of certainty or perhaps more correctly, a lesser degree of uncertainty; to contrive faster drilling with better directional control and more positive completion procedures; to develop economically sound storage and transportation systems; to extract the full potentiality of refining; and to broaden the usefulness of petroleum to all forms of industry.

All of this created a series of new departments within the Company proper, operating with more scientific exactitude and less of the element of chance. By 1911 when Standard Oil Company (California) had become entirely dissociated from the Standard group, it was already in itself a pretty

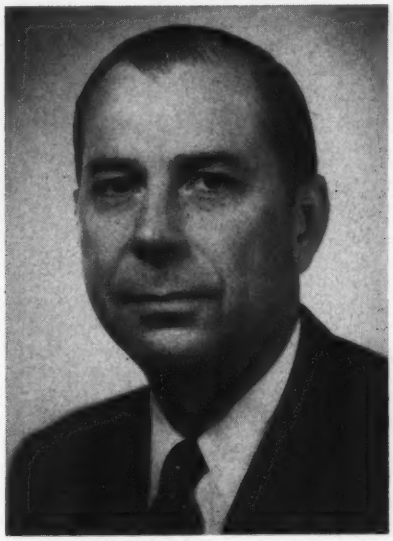
W.W. DAVISON, vice president of Standard Oil Company of California, in charge of industrial relations, was born in Peabody, Kansas; was graduated from University of California with a degree in mechanical engineering in 1921; and joined Standard as a junior engineer a few days later. He soon demonstrated outstanding ability and via a number of rapid promotions eventually became superintendent of the Vancouver, B. C., refinery. In 1938 he was appointed manager of operations for Standard Oil Company of British Columbia. In 1940 he was transferred to El Segundo and 4 years later had been named general manager. His election to a vice presidency took place in 1948.

sizable enterprise and growing like the proverbial weed. In no small way this was due to the invention and rapidly diversifying use of the internal combustion engine.

And New Techniques

Simultaneously, however, the geologists and their exploration aides were not only foraging afield technically,

GAGE LUND, vice president and director of Standard Oil Company of California in charge of exploration and production since 1948, is a native of Clinton, Iowa. He studied chemical engineering and geology at Montana State College and Stanford University. Had much to do with building up production for The California Company, Standard Oil Company of Texas, subsidiaries in South America and Canada, and affiliates in the Eastern Hemisphere. Well known and highly regarded.



KENNETH H. CRANDALL, vice president of Standard Oil Company of California, in charge of exploration, was born in Spencer, Iowa. He moved to California where he graduated from Stanford University with a degree in geology. In the following year, 1926, he began work with The California Company as an assistant geologist and for some years foraged about the Rocky Mountain, Texas, and New Mexico areas, searching for the "black Golconda." In 1935 he directed The California Company's first seismograph crew in South Texas, later took care of all that company's geophysical work and the same for Caltex. He was elected president of Calco in 1945, and a vice president of Standard in 1950.

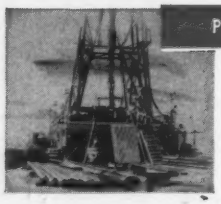
SPECIAL OIL WELL PROBLEMS REQUIRE HALLIBURTON'S SPECIAL CEMENTS AND ADDITIVES

Every oil well drilled has an individuality of its own. Two wells in the same field, drilled to the same depth, may require altogether different cementing techniques. In many cases, special well characteristics require special materials to help assure maximum cementing effectiveness and well protection.

Halliburton, the world's most experienced cementing organization, is *especially* qualified to help solve special oil well problems. Developed by laboratory research and field experience, Halliburton special cements and chemical additives have been proven to be effective wherever needed. Such problems as sulfate and salt water corrosion, high pressure gas and oil zones, elevated temperature of deeper wells ... these and others have been solved or minimized through the application of Halliburton's chemical aids.

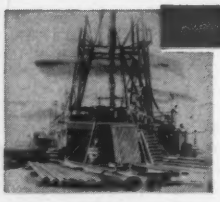
It takes but a moment to call your nearby Halliburton representative. Protect the investment you have in your well with the best cementing available today... Halliburton, of course!

THESE...AND OTHER...HALLIBURTON CEMENTS AND CHEMICALS CAN HELP TO SOLVE THE SPECIAL PROBLEMS OF YOUR OIL WELLS:



POZMIX CEMENT... THE OUTSTANDING POZZOLANIC COMPOSITION

Pozmix Cement is a blend of pozzolanic materials and portland cement with desirable characteristics that cannot be obtained with neat portland slurries. It is resistant to sulfate and salt water corrosion. Pozmix Cement is also lower in cost, easier to pump, easier to perforate, less permeable and more durable. It has an outstanding record of proven performance in a wide variety of applications.



POZMIX 140... FOR HOT, DEEP WELLS

Designed for oil well cementing where formation temperatures range from 140° to 400° or higher, Pozmix 140 is a pozzolanic composition made up of Pozmix "A" or "S", hydrated lime and set control additives to give it early initial strength. It contains no portland type cement. At temperatures above 140°F, Pozmix 140 equals or exceeds strength specifications for oil well cements, yet is designed to provide a maximum pumpability in the deepest of wells. Results with Pozmix 140 have demonstrated its effectiveness in every case.

RADIO-ACTIVE CEMENT... NEWEST SCIENTIFIC AID

RAC-1 and RAC-2 are useful in locating cement tops, even in multi-stage jobs, locating the treated zone after squeeze cementing, locating split pipe. Half-life of material makes for safe, surer identification of cement, even after considerable delays following original job. No contamination to equipment or production. Also RAYFRAC Sand, for use in fracture location and differentiation.

HR-4... RETARDER

A small amount of HR-4 added to the mixing water or the dry cement at Halliburton bulk plants results in a composition with a retarded set, permitting placement at high temperatures. It is used with portland or Pozmix Cement in the deepest of wells.

HR-7... DISPERSANT AND RETARDER

Used mostly in wells of moderate temperature, HR-7 is a chemical dispersant and retarder designed for high gel cement compositions. HR-7 is effective in obtaining smoother and more fluid gel cement slurries.

HA-5... AN EFFECTIVE ACCELERATOR

An improved accelerator for oil well cementing slurries to be used for surface pipe or shallow wells. Higher compressive strengths at early ages are obtained, permitting W. O. C. times as short as four hours on surface pipe at temperatures of approximately 80°F.

MUD-KIL... AN EFFICIENT NEUTRALIZER

A dry, granular material that effectively neutralizes the cement-retarding properties of mud treating chemicals such as quebracho and other tannins, starch, sodium carboxymethyl cellulose and lignite. Pumping time and compressive strengths of cement remain relatively constant.

HI-DENSE... HELPS TO CONTROL HIGH PRESSURE ZONES

Ground to a fineness that requires a minimum amount of mixing water, Hi-Dense is designed to increase the density of cement slurry and aid in controlling high pressure gas and oil zones. Because of the high specific gravity of Hi-Dense, it is possible to weight cement slurries to 20 lbs./gal., yet still maintain pumpability and strength stability at high temperatures.

HALLIBURTON CEMENTING SERVICES

HALLIBURTON OIL WELL CEMENTING COMPANY • DUNCAN, OKLAHOMA

F. M. JAYNE, vice president of Standard Oil Company of California, in charge of supply, demand, and distribution, was born in Salt Lake City, Utah, and was graduated with a master's degree in business administration from University of California in 1933. He began work with Standard the following year as a clerk at Richmond refinery but rose quickly to become head of the analytical section of the manufacturing department. He held high executive positions in the PAW during the second world war, and returned to Standard in 1946 as manager of the analytical division of the comptroller's department. Thence through successive stages he became secretary of the executive committee and general economics counsel to the president. He was elected vice president in 1954.

HILLYER B. BROWN, vice president and director, Standard Oil Company of California in charge of its diverse legal affairs, obviously believes in starting at the top. He joined the Company in 1948 as its chief legal counsellor, with the same title he now has. A native San Franciscan, he was graduated from Harvard University. Later attended Harvard Law School, and San Francisco Law School, receiving his L.L.B. from the latter in 1923. He was admitted to the California bar in that same year. Gave up a partnership in a noted San Francisco law firm to become a high echelon Chevronite.

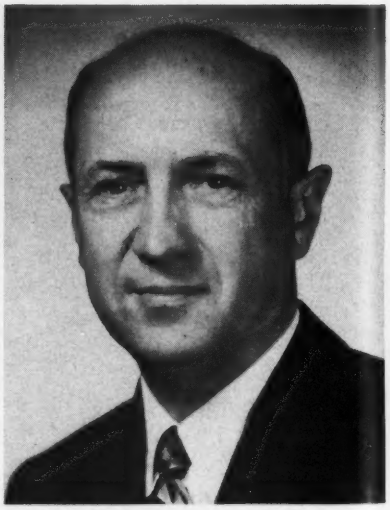
but were pushing into new areas both in and out of the country in the search for additional oil reserves. The drillers were following hard on their heels with new tools and new techniques and they were bringing in new wells and new oil fields. Pipe line gathering systems and storage farms were being installed in far away places with strange sounding names. The ocean-going tanker flotilla was expanded to facilitate strategic movement of crude and refined products. And here and there new, bigger, and more modern refineries were built on both domestic and foreign soil, to satisfy that inexorable arbiter of supply and demand, economics.

Meantime, down the years, world population has risen at an astonishing pace, and the demand for petroleum and its derivatives has continued to

OTTO N. MILLER, vice president and director of Standard Oil Company of California, is principal contact officer for California Texas Oil Corporation and the Caltex Group, Standard's Eastern Hemisphere affiliates. He was graduated with a master's degree from University of Michigan in 1932 and received his doctorate from the same renowned institution two years later. Following long experience in research and development, he moved into manufacturing. Held high posts in Arabia and El Segundo, and for 8 years supervised the Company's postwar growth in processing facilities. Has been with the Company 25 years.

parallel this trend. Some requirements had been so far removed from the normal, so specialized in nature, and so substantial in quantity, that they had necessitated the institution of subsidiary organizations for proper handling.

GEORGE J. O'BRIEN, vice president of Standard Oil Company of California, in charge of Government relations and conservation, needs no introduction to California oil men. He is a native San Diegan; was graduated from University of California in 1920; and began his working career with Standard as a crew man on an oil tanker and a refinery laborer, during college day vacations. In 1941 he was elected assistant to the president, with offices in Los Angeles and became widely and favorably known in Southern California, not only for his executive ability but for his complete friendliness. He was active in many civic, social, and industrial groups while here and was in all respects an admirable citizen.



PAUL L. FAHRNEY, vice president of Standard Oil Company of California in charge of marketing, was graduated from the University of Oklahoma in 1920 with a degree in chemistry, and immediately thereafter began his affiliation with Standard as an asphalt research chemist. He was moved to American Bitumuls Company as district manager at Baltimore, Maryland, where he directed the operation of a refinery together with the manufacture and sales of its products. He became president of American Bitumuls in 1942, and was elevated to his present high post in the parent company in 1948.

HERBERT D. ARMSTRONG, treasurer of Standard Oil Company of California, was born in Marin County; received his high school education at San Rafael; and was graduated in law from the University of California; so he is distinctly a product of the Bay area. After 10 years of valuable experience in high level banking with the Federal Reserve Bank of San Francisco, he joined Standard as assistant treasurer. Four years later, in 1947, he was appointed assistant to the chairman of the board; director of Caltex and related companies; and vice president of Iran California Oil Company. He is a director of the British American Chamber of Commerce and is active in a variety of civic and community affairs.

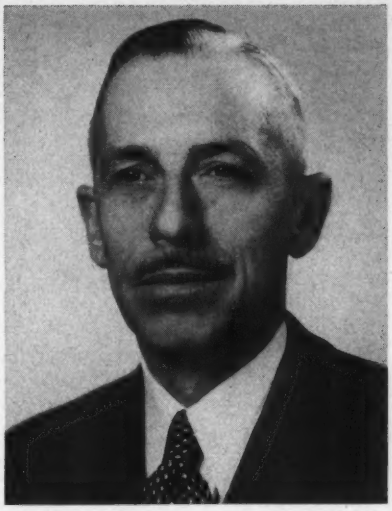
GEORGE A. DAVIDSON, vice president and director of Standard Oil Company of California, in charge of manufacturing, engineering, and research, started work with the Company as a chemist 39 years ago, just after he was graduated from University of California with a B.S. in chemistry. He has meantime acquired eminence as an expert on refining methods and product quality and has been much sought after by various governmental and industry technical agencies as a consultant on fuel development and other matters relating to petroleum and its uses.

The War Stimulus

In 1914 came the first world war and the vital importance of oil to national security sent the oil industry into a surge of activity such as it had never known. The war machine—biggest in history—moved and was in many respects activated by petroleum and its burgeoning offspring. Transportation by land, air, and water was involved, and supremacy in all three areas was necessary to victory. Standard Oil Company (California) played an important role in this titanic struggle and co-incidentally veered into some exciting new channels of investigation and exploitation.

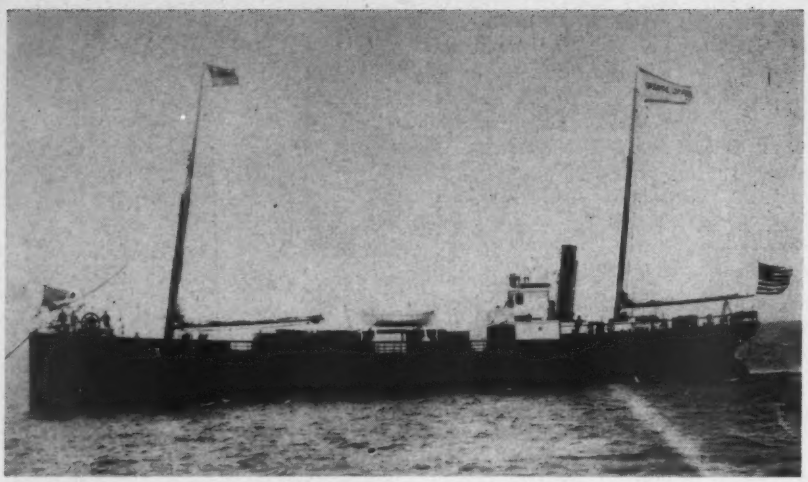
W. H. BEEKHUIS, vice president of Standard Oil Company of California in charge of foreign crude sales, is a native of Hanford, California, and was graduated from the University of California with an A.B. in economics. He joined Standard as a statistician in the manufacturing department and showed such exceptional aptitude he became chief analyst for the Company in 1941. During the war he was assigned to liaison work with government agencies on contracts for the building and operation of toluene, butadiene, and high-octane gasoline plants. He was named secretary of Standard's executive committee in 1949 and late in the same year was elected vice president.

Nothing accelerates research like war and nothing promotes industrial expansion like research! This war period saw the beginning of organized studies of engine performance and the coincidental reevaluation and revamping of fuel and lubricant quality. And it didn't stop when the war ended in 1918. Indeed, it has not ceased up to the present moment. The continuing development of higher compression en-



WILSON K. MINOR, comptroller of Standard Oil Company of California, was born in Arcata, California, attended University of California and Walton School of Commerce, and became affiliated with the old Pacific Gasoline Company in 1924 as a roustabout. He early demonstrated a flair for figures and for the first 20 years of his association received a thoroughly diversified experience in all forms of accounting. He completed a variety of important accounting assignments for Standard and its subsidiaries before being appointed assistant comptroller in 1947. His elevation to the position of comptroller took place in 1956.

ELMER R. PETERSON, vice president of Standard Oil Company of California in charge of finance, was born in Oakland, California, and was graduated from Oakland College of Law. He accepted a position in Standard's marketing department in 1923; functioned there in various capacities for 13 years; and was then appointed assistant to the executive staff. He later served as secretary to the Company's executive committee, performing confidential analyses, and preparing special statistical reports. In 1948 he was elected a vice president. Apart from business, he is an enthusiastic yachtsman, and is a popular member of the Windjammer Sailing Club of San Francisco Bay.



The S.S. George Loomis, first all-steel tanker to be constructed and operated on the Pacific Coast. Built for a predecessor firm of Standard Oil Company of California, it was launched in 1895. Capacity was 6,500 barrels, a fraction of the capacity of modern tankers.

T. L. "TED" LENZEN, vice president and director of Standard Oil Company of California, in charge of natural gas utilization and distribution, joined the Company following his graduation from Stanford University in 1928. He has spent much time overseas coordinating widely scattered operations of subsidiaries and affiliates in the Eastern Hemisphere. Is currently, among other things, directing Standard's interests in British Columbia, Central America, and the U. S. East Coast, and is also concerned with shale and natural gas reserves, and world girdling tanker operations.

gines and their tremendous public acceptance was carried on simultaneously with an intensive program of research in refining methods and product quality.

Middle East Interests

While reaching for high octane, it was discovered that crude petroleum could be reformed to yield highly concentrated aromatic and other stocks capable of replacing coal tar as the source material of a great variety ot useful commodities. The new age of petrochemicals was born and in this, Standard Oil Company of California (the present name was adopted in 1926) was a pioneer of many new departures in petroleum operation.

Research was now no longer an aid to business, it was a business in itself, and its interests were expanding beyond comprehension. At the same time the Company's foreign holdings were growing larger almost daily and the booming demand showed little sign of slacking off.

Having already extended its domestic operations into the Mid-Continent, Standard of California began negotiations for a concession in the Middle East. Successes on the tiny island of Bahrain on the Persian Gulf turned attention to the coast of Saudi Arabia across the strait. The Bahrain experiment had in three years' time built up production of 6500 barrels a day, necessitating the construction of a gathering system, a refinery, and a loading wharf.

Aramco Organized

In 1936 history repeated itself. In order to find a means of distribution for its Middle Eastern oil, Standard of Cal entered into an agreement with The Texas Company which already had sales outlets in Europe, Africa, and Asia. A new company, California Texas Oil Company (Caltex) was formed, in which the principals each had a 50% interest, for the purpose of producing, transporting, and marketing in the Eastern Hemisphere.

In 1933 a pact had been made with Ibn Saud, King of the Saudi Arabs, under which Standard Oil Company of California was granted development rights for 66 years on 320,000 square miles of Eastern Saudi Arabia. Out of this came the Arabian American Oil Company (Aramco), formed in 1948 with vested interests as follows: Standard of California, 30%; Texaco, Inc., 30%; Standard of New Jersey, 30%; and Socony Vacuum Oil Company, 10%. Currently the Saudi Arabian fields are producing in excess of a million barrels a day.

Accelerating Demand

The California Company (Calco) was formed to explore the eastern and middle western sections of the United States. Its first discovery was made in Louisiana in 1939 and it has since completed many wells in the open waters of the Gulf.

The second world war was the im-

THE S. S. UNIVERSE LEADER, capacity 737,000 bbls. One of a new fleet of tankers used by Standard to transport crude and products.

AUTOMATICALLY STOP TUBING BREATHING *and* BUCKLING . . *safely* . . *efficiently*

GUIBERSON HM2 HYDRO-MECHANICAL TUBING ANCHOR

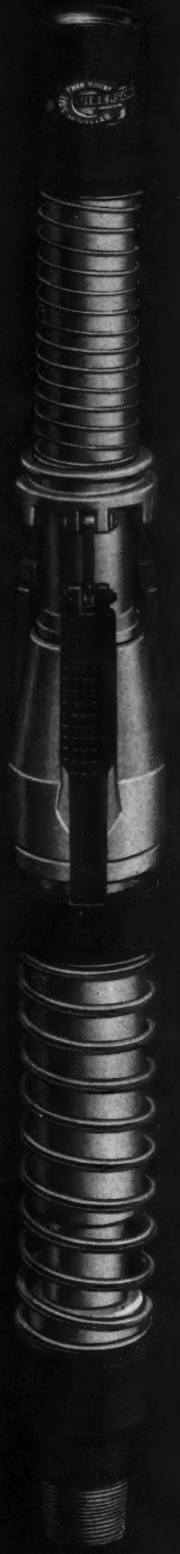
Install Guiberson HM2 Hydro-Mechanical Tubing Anchor and forget it. This anchor automatically adjusts for tubing stretch and contraction during pumping.

The HM2 is a *mechanically* operated anchor. A heavy spring keeps slips in a retracted position. When pumping, a pressure differential across the tool causes a piston to counteract the heavy spring; and, the upper spring mechanically forces slips into engagement with the casing. The piston then becomes a *static* seal; and thereafter, adjustments to well conditions are automatic.

Anchor moves freely down hole on pump's down-stroke . . automatically sets on upstroke. Tubing is held at its lowest level to prevent buckling and breathing for maximum pumping efficiency. Shear ring protects tubing from excessive tensile loads.

Install Guiberson HM2 Hydro-Mechanical Tubing Anchors and Start Pumping at Top Efficiency.

Sold by Oil Field Supply Stores Everywhere



Fluid rising in tubing automatically sets anchor . . no surface manipulation required.

Anchored tubing prevents tubing and casing friction damage.

Dovetail head and slips insure smooth, safe operation.

Generous by-pass areas assure safe running — retrieving.

Design prevents hydraulic pressure in tubing from loading shear release.

Anchor is released by straight pull shear release or tubing manipulation.

Shear release causes an upward jar to disengage slips . . . lowering tubing string to release anchor is not necessary.

THE

GUIBERSON

CORPORATION

ESTABLISHED 1919

DALLAS, TEXAS U. S. A.

petus for an unprecedented acceleration of production of practically everything turned out by the oil industry. This excited an intensified search for new petroleum reserves and better methods of finding them. At the same time, the critical nature of the situation that made enormously increased quantities of petroleum products so vitally essential also initiated a gigantic competitive scramble for not only the most, but the best. It was useless to have the fastest and most maneuverable planes, ships, and land vehicles without the fuels, lubricants, and other accessories to sustain these advantages.

The Standard of Cal refineries, along with most others in the nation, were turning out base stocks for the manufacture of explosives, rubber, pharmaceuticals and many other products besides the high octane fuels and super-lubricants that new speeds and power outputs demanded.

BURTON W. PICKARD, vice president in charge of marketing for Standard Oil Company of California, Western Operations, Inc., was born in Mora, Minnesota; attended University of Washington; and joined Standard in Yakima as a service station salesman in 1922. He has since had wide experience in the diverse phases of sales management. From 1947 to 1951 he served as assistant to the vice president in the negotiation of contracts with military and other government agencies, and in 1955 was elected president and director of the California Oil Company. Three years later he was named vice president, marketing, for Western Operations, Inc. In addition, he is chairman of the board of Standard Stations, Inc., and the Signal Oil Company, and is a director of American Bitumuls & Asphalt Company. His hobbies are gardening, golf, and being active in N.P.A., A.P.I. and O.I.C.

HOWARD G. VESPER, president and director of Standard Oil Company of California, Western Operations, Inc., is a native Pasadenan; studied chemical engineering at Cal Tech from which he was graduated with honors in 1922; began his affiliation with Standard on a labor gang at El Segundo refinery; and was soon recognized as a potential executive. By 1931 he had become manager of the El Segundo research and development department. Thence he was transferred to New York as a technical representative, specializing among other things in the sale of new type petro-chemicals. So successful were his sales efforts that shortly after his return to California, he was appointed manager of gasoline and fuel oil marketing. Then followed 4 years as president of Cal Research, during which he was elected vice president of the parent organization. In 1954 as vice president of the Western Division, he resumed his direction of marketing and related activities, this time with jurisdiction over the seven western states, Alaska and Hawaii. Prior to becoming president of Western Operations, Inc., he had been elected vice president and director in charge of marketing. Mr. Vesper has been active in many industry and governmental advisory groups and is currently president of Western Oil & Gas Association. He is a fine platform expositor on all phases of petroleum operation; has an unusual facility in the art of translating abstruse technical data into material that is appreciable to the layman; and is an easily approachable, modest, and altogether likable gentleman.

Cal Research

To expedite the processes of discovery, California Research Corporation was established with headquarters at Richmond. This subsidiary was designed to forage freely in all fields of petroleum research from exploration to refining, and its accomplishments have been utterly amazing. We have visited both the Richmond and La Habra laboratories on several occasions and each time have had a thoroughly interesting experience, watching an army of young and quite uninhibited scientists, blazing a thousand trails into the future.

A considerable proportion of the effort of Cal Research comes under the heading of product discovery or improvement. Much of the discovery is in totally new areas of synthetic chemistry, and for this reason it was found necessary to set up another subsidiary, Oronite Chemical Company, to find markets among the industrialists for an extending list of valuable base stocks and chemical products emanating from the refineries, after being brought through the pilot stage by chemists, physicists, and process engineers.

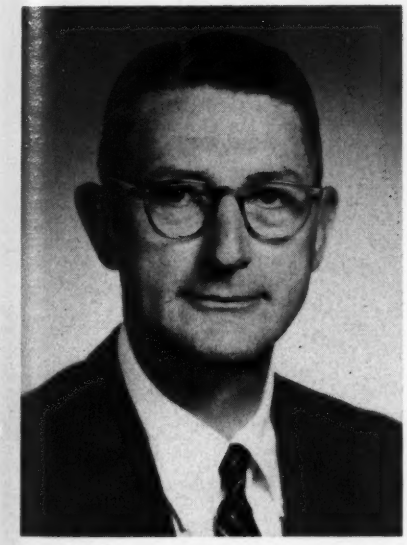
The resumption of peace time operation following the second world war brought no relief from the growing pains. If anything the pace was greater than ever. Changes in character of demand as well as quantity were responsible for a continuous program of plant adaptations and expansions. Crude lines and product lines and all the ac-

STANLEY W. TOTTEN, vice president, director, and general manager of exploration, Standard Oil Company of California, Western Operations, Inc., was born in Orange, New Jersey, received a degree in natural science from Rutgers University, and studied geology at Columbia University Graduate School. Before joining Standard of Cal, he enjoyed an interesting experience in field survey work in West Virginia, Tennessee, and Alaska. He was appointed western division geophysical supervisor in 1948 and later did considerable reconnaissance work in the Southern States. He was named western division exploration manager in 1955 and was elected to a vice presidency in 1956. His headquarters are in Denver, Colorado and he is active in the American Association of Petroleum Geologists, the Society of Exploration Geophysicists, and a number of other geoscientific organizations.

cessories of gas and oil transportation systems were built or rebuilt. From San Diego to Alaska they carried their burdens in ever increasing volume and variety.

Continental Expansion

A refinery was purchased at Perth Amboy in New Jersey on the Atlantic Coast to launch another new subsidiary, California Oil Company (Caloil), for the purpose of promoting eastern seaboard sales. It was promptly enlarged sufficiently to furnish petroleum products to twelve states and the District of Columbia, and has been more than comfortably occupied ever since its completion in 1945. The plants and facilities of another subsidiary, American Bitumuls and Asphalt Company, which manufactures and distributes all sorts of asphaltic products such as roofing materials, anti-corrosion coatings for pipe lines, road surfacing materials, etc., were revamped and expanded to permit coverage of the entire country.



FREDERICK C. LOOMIS, vice president and director of Standard Oil Company of California, Western Operations, Inc., in charge of supply and transportation, was born in Waterbury, Connecticut, but came west in time to attend Pasadena High School, and Stanford University, from which latter he was graduated in 1923. He attached himself to Standard Oil Company in the following year as an oilfield roustabout and thereafter became involved in many operational phases of the business. In 1945 he was appointed assistant manager of the natural gas department, and four years later had become oil purchase and exchange agent. By 1954 he was general manager of supply and transportation and was responsible for marine and pipeline movements, the distribution, purchase, and exchange of oil and gas, and the involved accounting. He was elected vice president of Western Operations, Inc. (Supply & Transportation), in 1957.

K. W. "KEN" KENDRICK, regional vice president, Standard Oil Company of California, Western Operations, Inc., began his career as a service station operator and just recently completed his 40th year with the Company. Ken was born in Iowa and educated in Minnesota but chose to live out his life here on the west coast. He first became a Chevronite in Tacoma, Washington, in 1919, and through a continued series of well deserved promotions became district sales manager in Los Angeles in 1943; regional manager of wholesale marketing in 1953; and regional vice president (Southern California) in 1957. Ken is a quiet demeanored, always solicitous chap, who is ideally equipped for his elevated post. His acquaintance among business people and civic authorities throughout California is almost fantastic and there are few men who have the good fortune to be so universally liked.

Salt Lake Refining Company is a Utah subsidiary that operates a plant in Salt Lake City which gets its crude by pipeline from Colorado. It also has a products line that carries refined products to five northwestern states. Other subsidiaries on the North American continent are the Standard Oil Company of British Columbia which has a refinery at Port Moody and serves western Canada; the California Standard Company which is a western Canadian exploration unit; and the Standard Oil Company of Texas which was originally organized solely for exploration and production purposes to operate in Texas and New Mexico, but is now a marketer, too. Indeed, it has met with phenomenal success in all departments and has expanded into a fully integrated enterprise.

Foreign Interests

In addition to Aramco, Trans-Arabian Pipe Line Company, Bahrain Petroleum Company, the Caltex group, Iran California Oil Company, and Far Pacific Investments, Inc. (Netherlands New Guinea), all of which gives Standard of Cal a strong position in the Middle and Far East, both with respect to production and marketing, the firm is also well represented in the Western Hemisphere outside the United States.

In South America, the Richmond group (Rexco) is actively searching for new reserves in Venezuela, Peru, and Colombia. Discovery of the Boscan field in Venezuela furnishes an endless supply of asphalt crude to Europe, South American markets, and the American Bitumuls plants in eastern United States.

There are exploration subsidiaries in Ecuador and Guatemala; in the Caribbean-Bahama, Cuba, and Trini-

J. E. "JULES" TOUSSAINT, vice president and director of Standard Oil Company of California, Western Operations, Inc., began his working career as a street car motorman in San Francisco. He was born in Berkeley and was graduated from University of California in 1922 with a degree in mechanical engineering. He joined Standard as a construction engineer at Richmond refinery and held several responsible jobs there before deciding to devote his talents to the uplift of the drilling and production business. He was named general manager of the producing department in 1945 and was elected an officer of the parent company in 1952. Five years later he was elected an officer and director of Western Operations, Inc., and is now responsible for all the producing operations of this organization. Jules is a popular member of the California oil fraternity. He is widely known and much admired among the field men of the State; is active in many technical societies; and is currently a director of Petroleum Production Pioneers of which he was a founding member.

First motor truck in Sales Dept. "Couple Gear" motor, wheel driven. Four wheel driver and steering—1911. Walter Williams at wheel.

FRED POWELL, president of California Chemical Company, which is an amalgamation of Oronite and Cal Spray Companies, was born in Portland, Oregon, and was graduated from University of Washington in 1922 as a chemical engineer. He joined Standard three years later as a mechanic's helper in the scale and meter shop at Richmond refinery, and has in the meantime had a varied and valuable experience in all phases of manufacturing and refining. He was manager of the refining division when he was transferred east where he later became president of California Refining Company at Perth Amboy. He has been president of Cal Research; general manager of manufacturing; and vice president and director of Western Operations, Inc. He was elected president and director of California Chemical Company in 1959.

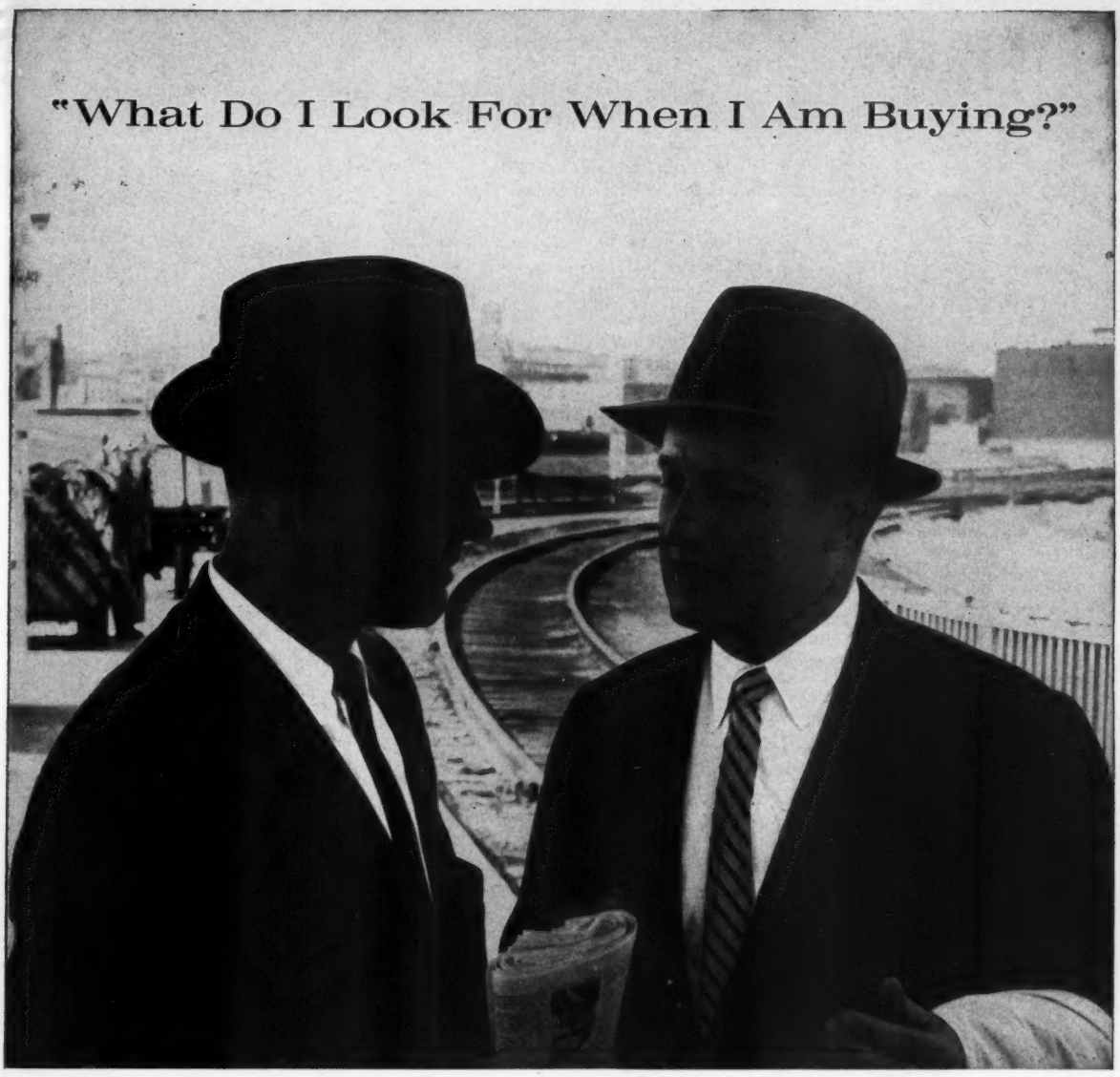
J. T. HIGGINS, vice president, director, and general manager of manufacturing, Standard Oil Company of California, Western Operations, Inc., was born in Morgan Hill, California, and was graduated from Stanford University with a degree in mechanical engineering in 1928. Following the completion of his education, he worked for a spell with Western Oil & Refining Company and then in 1929 joined Standard of Cal as a specialist at El Segundo refinery. Here he garnered an extensive experience in process and procedure and after a continued series of promotions was transferred to Richmond, of which he eventually became manager. In 1953 he was elected president of the Salt Lake Refining Company and the Salt Lake Pipe Line Company. His comprehensive knowledge of refinery operation is well known, and his recent elevation to a vice presidency in charge of manufacturing for Western Operations, Inc., is a well earned recognition of his experience and talent in this field.

dad; and in Mexico. These constitute separate entities in the Standard of California group, elements of which are also to be found in other widely scattered world areas. Compania Petrolera California Ltd. markets refined products in Guatemala, El Salvador, Honduras, and Costa Rica, and is helping greatly to solve the transportation problems of these republics and at the same time to develop more fully their agricultural and general industrial potential.

Recent Changes

This is far from being a complete account of the ramifications of Standard of California. Many subsidiaries of considerable dimension function in diverse phases of operation such as marine and pipeline transportation; manufacture and distribution of agricultural aids; crude oil exchange and marketing; and management of investments. These, however, are sufficient to show that, as we said in the beginning, enlargement is a natural consequence of success in satisfying the needs of industry and society. In some countries it is mandatory that separate and distinct organizations be estab-

Standard's latest low profile tank truck with a capacity of over 6,000 gals.



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Made and sold by People I know
and know I can trust

... The M. E. Gray people
and the products they sell are like that"

Typical expression of M. E. Gray customers

M. E. Gray Company

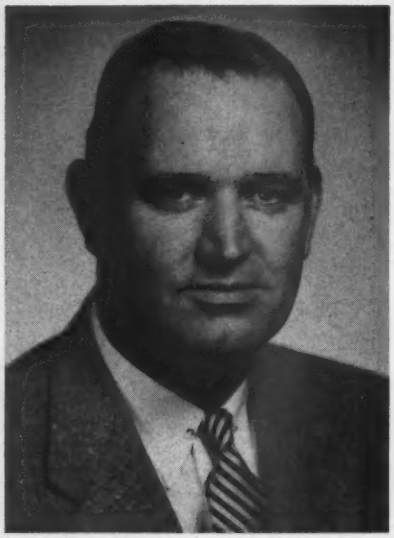
Bell Gardens, California

E. E. WALL, president and director of The California Oil Company, Perth Amboy, New Jersey, was born in Honolulu, Hawaii, attended University of Hawaii, University of Oregon, and University of Southern California. He joined Standard in Honolulu as a plantman in 1934. Following a diversified sales experience in the Islands, he came to the United States as branch manager at Bakersfield. After 20 years of additional sales effort, he was named general sales manager of The California Oil Company. In 1957 he became vice president in charge of marketing, and shortly thereafter was elected to the presidency.

T. G. HUGHES, president of Oronite Chemical Company is a native of Oakland, California; is an alumnus of the Armstrong Business College in Berkeley; and started his business affiliation with Standard Oil Company of California as a hall boy in 1926. His early association was with Pacific Gasoline Company which later became Standard's Natural Gasoline Department. Following a short tour of duty with American Bitumuls & Asphalt Company, he joined the Oronite Company in 1943 and was promoted to the position of chief executive of that organization in April, 1950.

lished to operate concessions. In others it is usually more convenient and less costly to do so.

A recent change that is of special interest to Californians is a rearrangement of the corporate structure to bring all the wide-spread and varied interests of the company into sharper focus, and to allocate executive responsibilities in a more definite and more equitable fashion. With Standard of Cal and its operating companies active in every one of the 50 states and 80 foreign countries, the difficulty of conducting the multiplying affairs of the large western segment and the world wide operations, with the same



J. E. "JIM" GOSLINE, president of Standard Oil Company of Texas, was born in Carnegie, Penn., but brought up in Santa Paula, California. He was graduated with a Ph.D. in engineering from University of California in 1933 and in 1953 attended the advanced management class at Harvard. He began his Standard career as an engineer and 10 years later was manager of the southern district producing department in Los Angeles. By 1954 he was general manager of the producing department in San Francisco, and in 1958 was named director, vice president, and assistant to the president of The California Company. His election to the presidency was effective January 1, 1960. Jim is a widely known Californian—a founder and three years president of Petroleum Production Pioneers.

group of executives, was becoming uncomfortably apparent. A new plan was thus developed after long and careful consideration of all the involvements.

Part of the organizational plan was to segregate the western operating functions — exploration, producing, manufacturing, pipeline, marine, motor

CLYDE W. TURNER, president of American Bitumuls & Asphalt Company, was born in Sacramento, and was graduated from University of California in 1922 with a B.S. degree in commerce. Following his graduation, he toured the Orient as a member of the University of California baseball team and glee club. He began his oil career as a service station operator for Standard in Oakland in that same year, and progressed via the sales route to his present high post. He worked on increasingly important assignments in most of the western states, including Hawaii, and was elected president of American Bitumuls & Asphalt Company in 1952.

KENNETH H. SHAFFER, chairman of the board, Standard Oil Company of Texas, was born in Santa Rosa, California, and was graduated from University of California with a B.S. in civil engineering in 1927. He accepted a position with Standard of Cal two years later at San Francisco. He has since been general manager of industrial relations; assistant general manager of the producing department; vice president and assistant to the president of The California Company; and president of Standard Oil Company of Texas. He became chairman of the board on January 1, 1960.

ALBERT E. KIHN, president of California Shipping Company, is a native San Franciscan who has been with Standard Oil Company and its subsidiaries for 50 years. He began his association in clerical and statistical work in the marine department in 1910 and judging by what happened subsequently he certainly made the right choice. By 1916 he was personnel supervisor of the marine department and culminating a long series of promotions, he became manager of marine operations in 1949. His election to the presidency of California Shipping Company came in 1957. He is a past president of the Pacific Marine Exchange; a past president also of the Pacific American Tankship Association; and a member of several other important industry and government organizations having to do with shipping and related matters.

transport, and marketing—as a separate division, functioning in a manner very similar to that of a subsidiary. Added were certain staff and service departments that were really an integral part of the western scheme. This sizable entity (23,000 employees) was designated "Western Operations Division" and it was placed under the direction of well tried and thoroughly capable officers of Standard of California.

At the same time, another group of officers, staffs, and supporting departments, was set up to plan and coordinate global operations. This group was entitled, "The Corporation," and was expected to number about 700 persons in all when completed. Each officer of the corporation was assigned responsibility for certain specific phases of the overall operation, and reports directly to T. S. Petersen, president of Standard Oil Company of California, or to R. G. Follis, chairman of the Board.

This divisional type of organization was used for a little over three years to allow time for study, for break in, and for observation to see if it would cause any duplication of functions. These did not materialize.

Western Operations, Inc.

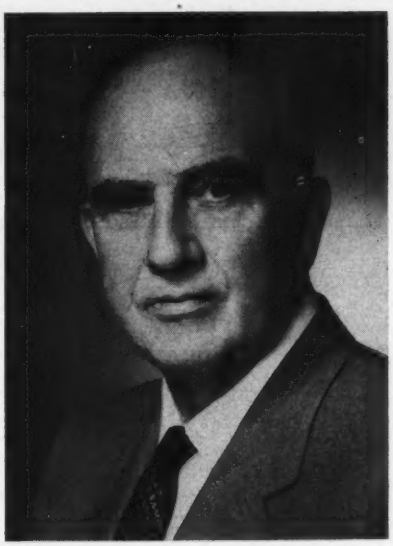
So, in 1957, The "Western Operating Division" was changed from a division to a management company and retitled "Standard Oil Company of California, Western Operations, Inc." Under this arrangement, the corporation still retained legal title to all the assets, but signed over the management under contract.

The growth of this great institution

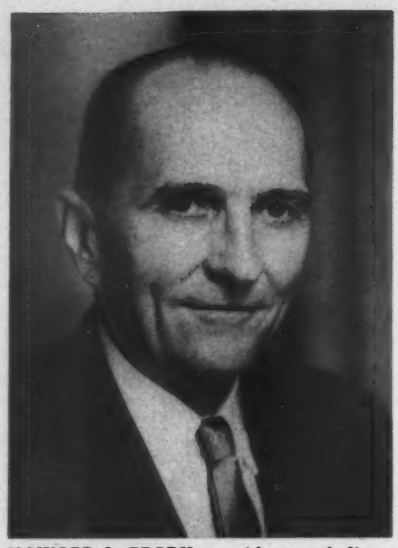
ARTHUR L. LYMAN, president of California Research Corporation, is a native of Bloomington, California. He was graduated from University of California in 1924 and began work for Standard as a research chemist in that same year. He rose to be manager of the development department at the Richmond laboratories which position he held for 7 years. His progress continued and in 1946 he was named vice president and director of the laboratories. In 1953 he was elected executive vice president, and one year later became president of Cal Research. He is active in many regional and national scientific organizations. Is a past chairman of the petroleum division of the American Chemical Society, and a director of the coordinating research council of the American Petroleum Institute.

from a very small beginning is a classic example of free enterprise in action. Many of its executives were men who started their business careers in very minor positions and by their own aptitudes and exertions raised themselves to the heights. Adaptation to expansion has been an important responsibility of these executives from the start, and grows more important with every technical or territorial advance. Growth is the inevitable effect of ac-

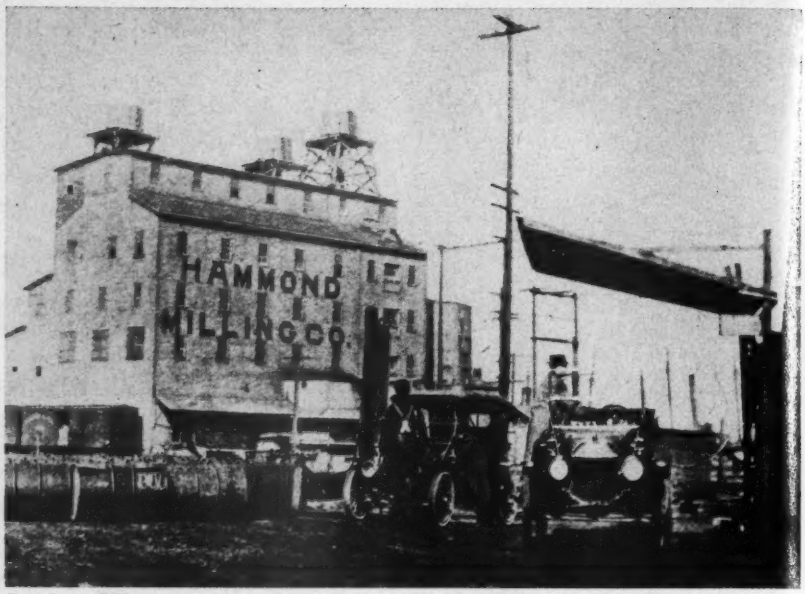
H. C. TEASDEL, president of The California Company, is a native of Salt Lake City; was graduated from University of Utah in 1915; and attended Harvard Graduate School of Business Administration in 1916 and 1917. He began work with Standard in the Comptroller's department in 1920 and has since had much experience in executive phases of operation with Standard and its subsidiaries. He became president of The California Company in 1947. An interesting feature of Mr. Teasdel's background is that he was once a reporter for the Salt Lake Tribune.



RALPH D. BAKER, president and managing director of Standard Oil Company of British Columbia, Ltd., was born in Napoleonville, Louisiana, attended Marion Military Academy, and the United States Naval Academy at Annapolis, Md.; and then became a part of the U. S. Navy as an ensign. He emerged three years later, a lieutenant j.g., and joined Standard as a clerk at Seattle, Washington. He became superintendent of city sales in San Francisco in 1936 and two years later was transferred to the B. C. organization at Vancouver as manager of sales. He was named vice president and director in 1941 and elevated to the presidency in 1943.



HOWARD J. GRADY, president and director of California Spray-Chemical Corporation and president of Ortho Agricultural Chemicals, Ltd., of Canada. A native of Pennsylvania and graduate of the University of Kansas, Grady joined Calspray in 1926 as a research entomologist and served as the company's European representative from 1931 to 1939. During World War II he served as branch manager in Portland, Oregon, and later as manager of the Pacific Northwest sales district. In 1948 he went to Washington, D. C., as regional manager of marketing on the East Coast and ten years later was named executive vice president at Calspray headquarters in Richmond, California. During the Korean War, Grady served the office of Price Stabilization as manager of the Agricultural Chemicals Branch.



Standard Oil's first service station, in operation in 1907, in Seattle, Wash. Said to be the first service station in America, and probably in the world.

ceptance and is in all respects "a consummation devoutly to be wished."

A Personal Word

We would like to say in conclusion that it has been our good fortune over the past 30 years to become acquainted with many Standard of Cal employees —those in high places as well as those in the rank and file. Almost without exception they have been wonderful people, well informed, friendly and accommodating, and above all obviously completely happy in their jobs. As a representative of the press, we have visited their research laboratories on a number of occasions; have shared with them the excitement of new field discoveries and new plant installations; and we have never failed to realize keenly and appreciatively how warmly we were welcomed and how altogether human and unpretentious have been the welcomers.

One of Standard's modern service stations.

More Properties Acquired By Producing Properties

Producing Properties, Inc., recently announced the acquisition of certain properties previously owned by Great Lakes Oil and Chemical Company of Los Angeles.

These properties consist of 13 leases and 47 wells located in Ventura, Kern, and Los Angeles Counties, California, producing approximately 620 barrels of net oil per day. According to the estimates of PPI's engineers this purchase will add some 600,000 net barrels of oil to the Company's reserves after allowing for the liquidation of certain outstanding oil payments on the properties.

This purchase will result in a current production of 4,000 barrels per day for PPI's Western Division, operated out of their Beverly Hills office.

John R. Sabina Predicts Increase

With the number of automobiles on the road expected to increase from the current 60 million to 85 million in 1970, gasoline refiners must plan not only for a 30 per cent increase in U. S. gasoline consumption over the next decade but also for cars having octane requirements of 103.5 and over by 1966.

That prediction, encouraging from a business standpoint but presenting new technological challenges to the industry, was presented to the third Delaware Valley Regional Meeting of the American Chemical Society in Philadelphia on Feb. 25 by John R. Sabina, planning manager of Du Pont's Petroleum Chemicals Division.

Based on a study of trends in automobile engine design and resultant fuel demands, he said, flexibly designed catalytic reformers will be the "backbone of tomorrow's refinery for production of premium grade gasoline." In addition, alkylation, hydrocracking and isomerization also will be used in increasing degrees, along with new types of antiknock additives, to attain the required gasoline quality level.

"Tremendous demands have been made of the refining industry in the last few years," he said, "while giant strides have been made by the petroleum industry in supplying the higher quality automotive fuels which have allowed engine designers to produce more economical and efficient automotive power plants."

Challenges to be met by the refining industry, Mr. Sabina told the ACS group, include both higher production and higher quality fuels to satisfy projected engine designs.

In addition to changes in processing techniques at the refining level, Mr. Sabina said that tetraethyl lead, manufactured by Du Pont as a gasoline antiknock additive since 1923, will continue to be used as an octane improver. As octane numbers continue to rise, the amounts of TEL used in regular and premium grade fuels can be expected to increase. Several new antiknock materials, which may help refiners achieve required fuel quality at a minimum cost, include tetramethyl lead for highly aromatic fuels, methyl cyclopentadienyl manganese tricarbonyl as a supplement for tetraethyl lead in highly paraffinic fuels, and tertiary butyl acetate which has been suggested as a booster for TEL in higher octane gasolines.

Earth's Magnetic Field In Outer Space Discussed

Outer space variations of the earth's magnetic field was revealed by Dr. C. P. Sonett of Space Technology Laboratories, Incorporated, for the Pacific Coast Section of the Society of Exploration Geophysicists at the monthly luncheon meeting, March 10.

Dr. Sonett, who is head of space physics for STL, discussed magnetometer experiment results obtained from Pioneer I, lunar probe satellite, and Explorer VI, paddle-wheel earth satellite. These results indicate oscillations and current flow in the magnetic field which may be a link to better understanding of various phenomena, notably the Aurora Borealis, according to Nolen Webb, southern vice-president of the section.

Webb also announced appointment of W. C. Kellogg of Fairchild Aerial Surveys, Incorporated, as registration chairman for the year. Kellogg will handle all luncheon reservations.

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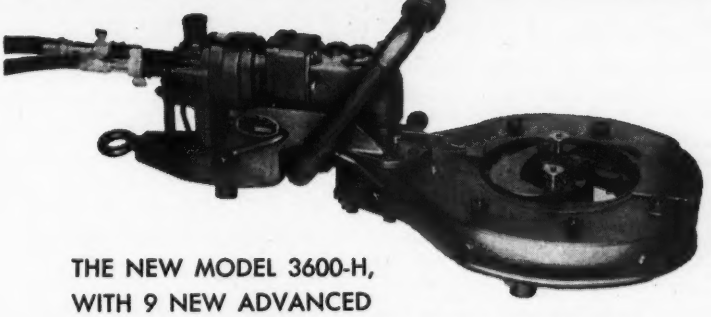

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CALIFORNIA STRIPPER WELL ASSOCIATION
SAN JOAQUIN VALLEY OIL PRODUCERS ASSOCIATION

Los Angeles, California
February 24, 1960

To all California Oil Operators—

Gentlemen:

You will be interested to know that response to the joint questionnaire sent out recently by the above associations revealed many significant data on the economic status of the California independent producers. Replies made it clear that some are still forced to sell their oil at less than posted prices and that there has been a significant number of contract cancellations.

However, it appears that the revision of import quotas into District V for the January-June period could result in bettering the situation. Hence the Committee of Independent Producers mentioned in our earlier letter is marking time and standing by until the results of the new quotas can be appraised.

All aspects of the import situation will be closely watched so that additional factual data can be developed for presentation to Washington, should the present import program fail to improve economic and marketing conditions. Therefore, you may expect further reports from time to time from one or more of the associations which will keep the program under constant surveillance.

All associations express their appreciation to each of you who replied to the questionnaire and solicit your continued cooperation to the end that the import program can be made to accomplish its objective—the maintenance of a healthy and vigorous domestic producing industry in the interest of national security.

Yours very truly,

Stark Fox

SF/mmd

Summary of District V Oil Industry Conditions December, 1959, and January 1960 (Preliminary)

By OIL PRODUCERS AGENCY OF CALIFORNIA

Highlights

Probably the most significant development during the year 1959 was the consistent withdrawal of residual fuel from storage, resulting in a decrease of 9,966,000 barrels, from 32,202,000 on December 31, 1958, to 22,236,000 on December 31, 1959. The reduction from the most recent peak in residual stocks, 34,272,000 barrels on October 31, 1958, was even greater at 12,036,000 barrels. During the 14-month period November 1958-December 1959, inclusive, the average withdrawal from residual stocks was 28,000 b/d. During 1959 alone, the average withdrawal was 27,000 b/d.

A second significant development during the past year was a drop of 5,926,000 barrels in crude stocks, from 40,201,000 on December 31, 1958 to 34,275,000 on December 31, 1959.

The crude and residual fuel decreases totaled 15,892,000 barrels, while total petroleum stocks decreased only 12,788,000 barrels, from 139,684,000 on December 31, 1958 to 126,896,000 on December 31, 1959.

The discrepancy is accounted for by increases of 2,501,000 barrels in gasoline and 1,130,000 in distillate fuel, for a total gain of 3,631,000 barrels. Relatively minor changes in other products account for the remainder of the difference.

A summary of U. S. Bureau of Mines data for December, with an estimate for January based upon weekly U. S. Bureau of Mines and American Petroleum Institute reports, follows. Also included is a comparison of results for the years 1959 and 1958.

Total Supply, Demand and Stocks

Total supply in December was 1,396,000 b/d, 37,000 b/d more than the November average of 1,359,000 barrels and 22,000 b/d higher than in December, 1958, when it was 1,374,000 b/d.

December demand was 1,415,000 b/d, up 32,000 b/d from November's 1,383,000 b/d and 52,000 b/d from the average of 1,363,000 b/d in December, 1958.

Stocks decreased 582,000 barrels, 19,000 b/d, during the month and were 126,896,000 barrels on December 31, compared with 127,478,000 on November 30 and 139,684,000 on December 31, 1958. The year's decrease was 12,788,000 barrels.

Weekly figures for January indicate that total supply was 1,324,000 b/d, demand was 1,503,000 b/d, and stocks decreased 179,000 b/d. This decrease, 5,549,000 barrels for the month, would bring stocks to 121,347,000 barrels on January 31, compared with 137,477,000 on January 31, 1959. The year's decrease was 16,130,000 barrels.

1959 Vs. 1958

Total supply in 1959 averaged 1,330,000 b/d or 3.6% higher than the 1958 average of 1,284,000 b/d.

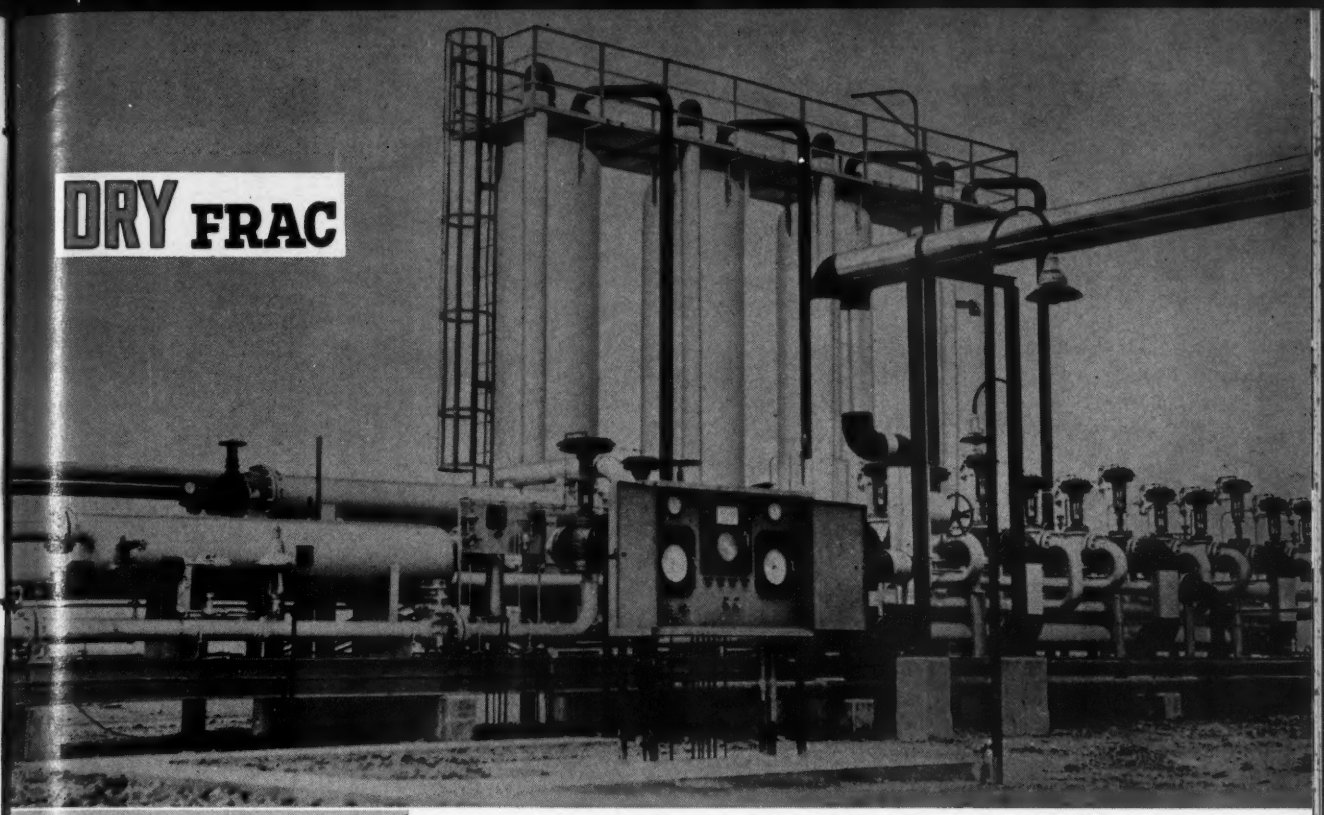
Total 1959 demand averaged 1,369,000 b/d, an increase of 95,000 b/d or 7.4% over 1958 demand of 1,274,000 b/d.

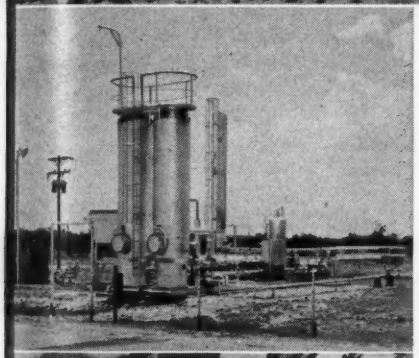
Stocks decreased 12,788,000 barrels, 35,000 b/d, during 1959, compared with a decrease of 4,700,000, 14,000 b/d, during 1958.

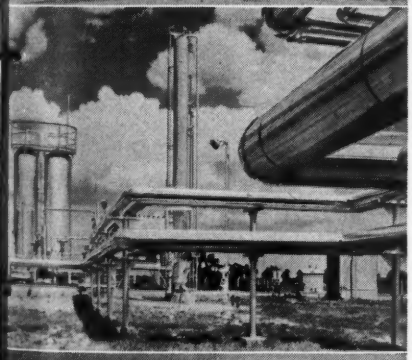
Crude Production, Imports and Stocks

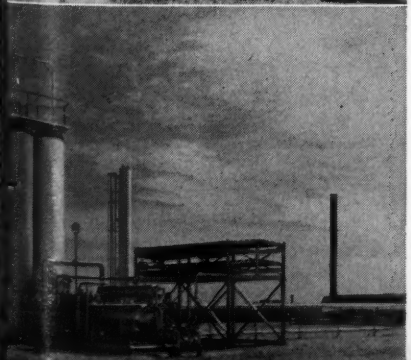
Crude production in December averaged 837,000 b/d, 3,000 b/d less than the November average of 840,000 b/d and 13,000 b/d less than the average of 850,000 b/d in December, 1958.

According to the Oil Import Administrator's report, crude and unfinished oil imports, including exempt Canadian imports of 42,536 b/d, were 304,319 b/d in December. In addition, there were product imports of 11,236 b/d, making a total of 365,555 b/d. November imports









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Call your nearest BS&B representative today. Or if you want to find out more information first, write for the new brochure Bulletin 33-112. Remember the name—DRY FRAC—by BS&B!

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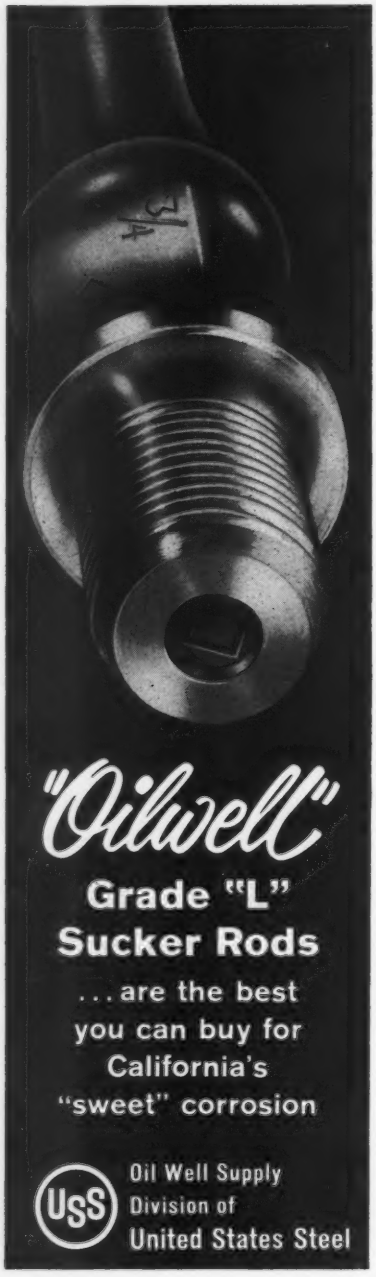
BS&B

ANOTHER EXAMPLE OF PRODUCT LEADERSHIP

totaled 289,733 b/d and December, 1958, imports were 233,900 b/d.

Crude stocks increased 1,378,000 barrels, 44,000 b/d, during the month and were 34,275,000 barrels on December 31, compared with 32,897,000 on November 30 and 40,-201,000 on December 31, 1958. The year's decrease was 5,926,000 barrels.

Weekly figures for January indicate that crude production was 830,-000 b/d, imports were 226,000 b/d, and stocks decreased 42,000 b/d. This decrease, 1,302,000 barrels for the month, would bring crude stocks to 32,973,000 barrels on January 31, compared with 38,903,000 on January 31, 1959. The year's decrease was 5,930,000 barrels.



Gasoline Supply, Demand and Stocks

Supply of gasoline in December was 586,000 b/d, down 14,000 b/d from the November average of 600,-000 b/d, and down 12,000 b/d from the level of 598,000 b/d in December, 1958.

December gasoline demand was 544,000 b/d, 3,000 b/d less than November's 547,000 b/d but 2,000 b/d higher than the average of 542,000 b/d in December, 1958.

Gasoline stocks increased 1,290,-000 barrels, 41,000 b/d, during the month and were 30,853,000 barrels on December 31, compared with 29,563,000 on November 30 and 28,-352,000 on December 31, 1958. The year's increase was 2,501,000 barrels.

Preliminary figures for January indicate that gasoline supply was 586,000 b/d, demand was 535,000 b/d, and stocks increased 51,000 b/d. This increase, 1,581,000 barrels for the month, would bring stocks to 32,434,000 b/d on January 31, compared with 29,714,000 on January 31, 1959. The year's increase was 2,720,000 barrels.

1959 Vs. 1958

Gasoline supply averaged 574,000 b/d in 1959, 20,000 b/d or 3.6% more than the 554,000 b/d average in 1958.

Gasoline demand in 1959 was 569,000 b/d, up 8,000 b/d or 1.4% from the 1958 average of 561,000 b/d.

Gasoline stocks increased 2,501,-000 barrels in 1959, against a decrease of 2,879,000 in 1958.

Distillate Fuel Supply, Demand and Stocks

Supply of distillates in December was 197,000 b/d, 12,000 b/d higher than November's 185,000 b/d and 4,000 b/d higher than the average of 193,000 b/d in December, 1958.

Distillate fuel demand was 225,-000 b/d, 2,000 b/d higher than in November and in December, 1958, both of which average 223,000 b/d.

Distillate stocks decreased 846,-000 barrels, 28,000 b/d, during the month and were 15,044,000 barrels on December 31, compared with 15,-890,000 on November 30 and 13,-914,000 on December 31, 1958. The year's increase was 1,130,000 barrels.

Weekly figures indicate that distillate supply was 209,000 b/d, demand was 265,000 b/d, and stocks decreased 56,000 b/d in January. This decrease, 1,736,000 barrels for the month, would bring stocks to 13,308,000 barrels on January 31, compared with 13,445,000 on January 31, 1959. The year's decrease was 137,000 barrels.

1959 Vs. 1958

Supply of distillates was 196,000 b/d in 1959, up 23,000 b/d or 13.3% from the 1958 average of 173,000 b/d.

Distillate demand was 195,000 b/d in 1959, 12,000 b/d or 6.6% more than the average of 183,000 b/d in 1958.

Residual Fuel Supply, Demand and Stocks

Supply of residual fuel was 279,-000 b/d in December, 11,000 b/d less than November's 290,000 b/d and 23,000 b/d less than the average of 302,000 b/d in December, 1958.

Residual fuel demand was 371,000 b/d in December, up 38,000 b/d from November demand of 333,000 b/d and up 24,000 b/d from the December, 1958, average of 347,000 b/d.

Stocks of residual fuel decreased 2,846,000 barrels, 92,000 b/d, during the month and were 22,236,000 barrels on December 31, compared with 25,082,000 on November 30 and 32,-202,000 on December 31, 1958. The year's decrease was 9,966,000 barrels.

Preliminary figures indicate that in January, residual fuel supply was 283,000 b/d, demand was 408,000 b/d, and stocks decreased 125,000 b/d. This decrease, 3,875,000 barrels for the month, would bring stocks to 18,361,000 barrels on January 31 compared with 29,862,000 on January 31, 1959. The year's decrease was 11,501,000 barrels.

1959 Vs. 1958

Residual fuel supply in 1959 was 283,000 b/d, 29,000 b/d or 9.3% less than the 1958 average of 312,000 b/d.

Demand for residual fuel was 311,000 b/d in 1959, 14,000 b/d or 4.7% higher than in 1958, when it was 297,000 b/d.

Residual fuel stocks decreased 9,966,000 barrels during 1959, compared with an increase of 5,390,000 barrels in 1958.

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Oil Tool Corp.
In Ventura, this round hole perforator is our newest, and the fastest machine of its type. One of the many specialized machines we have designed and built to increase output . . . and to give you faster and better tubular service . . . day or night. That's what we mean by —service is Oil Tool.
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World's Increased Demand For Oil Will Take Up Today's Oversupply

"Pessimistic attitudes within the oil industry toward today's oversupply of crude oil will, eventually, be erased by the world's increasing desire for more and more oil," Wayne E. Glenn, newly installed President of the Society of Petroleum Engineers of the American Institute of Mining, Metallurgical, and Petroleum Engineers, has predicted in a forecast statement at the beginning of his term. The Institute has just concluded its national convention in New York.

Glenn, who is general manager, production, Continental Oil Co., Houston, Tex., said:

"Demands for oil in the free world are increasing at the rate of well over a million barrels per day per year. Today's overcapacity will provide the wherewithal to meet the greater demands of tomorrow."

Admitting that current overcapacities in crude oil production create problems now, Glenn commented that "problems like this are not new to the oil industry or to industries in general. We simply must recognize a fundamental principle of economics: that demand should determine volumes of production.

Glenn pointed out that during 1959, domestic crude oil production increased about five and one-half percent over that of the preceding year, and that, simultaneously, demands for this same production were about four percent over the 1958 level. "Both increases are in line with long-term trends and took place despite a slowdown in general business activity caused by the steel strike," said Mr. Glenn.

"Despite these increases, the problem of overcapacities was augmented by continuing increases in the cost of finding, developing and producing oil. Greater emphasis is being placed on wider well spacing, improved technology in all phases of the petroleum industry and increased uses of secondary recovery techniques in an effort to stop this upward spiral. Factors such as these, along with the need for more oil, will transform today's overcapacity into a useful and worthwhile situation in the future. The next two to five years should provide real opportunities for the engineer who is willing to meet the challenge."

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THE Lufkin LINE

OIL FIELD PUMPING UNITS

DID YOU KNOW . . .

V. J. Fawcett

that, the town of Lufkin, Texas, besides being world famous for coon hunting, southern style, is also the home of Lufkin Gears for Industry, Oil Field Pumping Units, and Heavy Duty Truck Trailers?

that, the town is nestled among the tall pine trees of East Texas, where forests thrive and grow five times faster than in other parts of the U.S.? Heavy rain fall and warm temperatures make it so.

that, the great southern paper industry utilizing southern pine, long leaf and loblolly pine, began in Lufkin, Texas—home of the Southland Paper Mills, back in 1937? E. L. Kurth, board chairman of Lufkin Foundry and Machine, is president of Southland, and to Mr. Kurth goes the credit for pioneering this vast industry from its infancy. Modestly, however, he would be the last to claim such recognition.

that, Lufkin Oil Field Pumping Units have earned worldwide recognition for performance, dependability, and long life?

that, Lufkin Gears for Industry are fast gaining prominence in the fields of refining, pipelining, marine propulsion, aircraft ground support, and yes, even outer space?

But, it's not all sweatin' and strainin' at Lufkin—the folks there are easy goin' and find time to go cat fishing, coon hunting, squirrel and crap shooting, and sometimes, go in for just plain loafing.

Lufkin FOUNDRY & MACHINE COMPANY

Witfield Chemical Corp. Formed by Richfield

The formation of Witfield Chemical Corporation, a new venture jointly owned by Richfield Oil Corporation of Los Angeles and Witco Chemical Company, Inc., of New York, was announced March 7. David E. Day, vice president of Richfield, has been elected president and chief executive officer of Witfield, and Max A. Minnig, Witco's president, has been named executive vice president.

Witfield will undertake the construction and subsequent operation of a $1.75 million petrochemical plant for the production of dodecylbenzene, a basic raw material used in the manufacture of detergents.

The plant will be located adjacent to Richfield's Watson refinery in Los Angeles. The contract for its construction will be awarded in the near future. Present plans call for completion early next year.

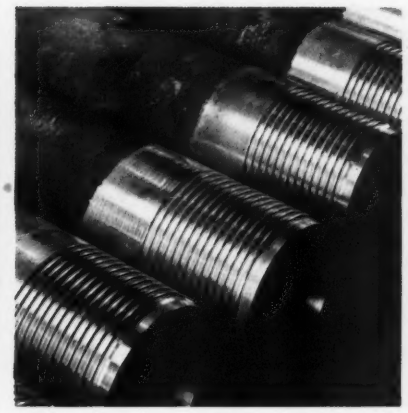
Richfield will supply the raw materials for the new operation—namely, benzene and propylene tetramer; and Witco will assume responsibility for marketing the plant's output.

Producing Properties, Inc. Acquires Interest In Morrow Oil Co.

Producing Properties, Inc. recently announced the purchase from Morrow Oil Company of Los Angeles, California, of interest in certain properties previously acquired from the Southern California Petroleum Corporation, also of Los Angeles, California.

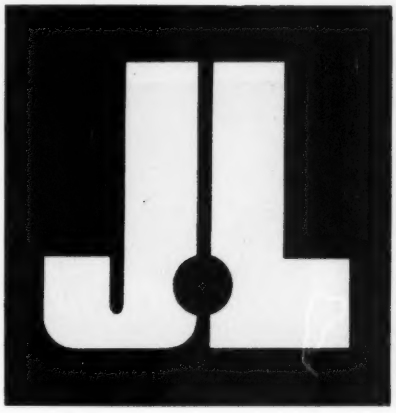
Producing Properties, Inc. paid $405,000 cash for these properties. Under the terms of the sale, Morrow Oil Company retained an oil payment in the amount of approximately $1,351,000. The properties acquired consist of approximately 180 wells located in California, New Mexico, and Texas. The primary value in this purchase is in the Jalmat area of Lea County, New Mexico, and in the Morales and Rosecrans-Athens Fields, California. It is estimated by PPI's engineers that this purchase will result in an increase in the net reserves of the Corporation of 519,215 barrels of oil and 11,039,222 Mcf of gas. These reserve estimates make complete allowance for the liquidation of the oil payment retained by Morrow Oil Company.

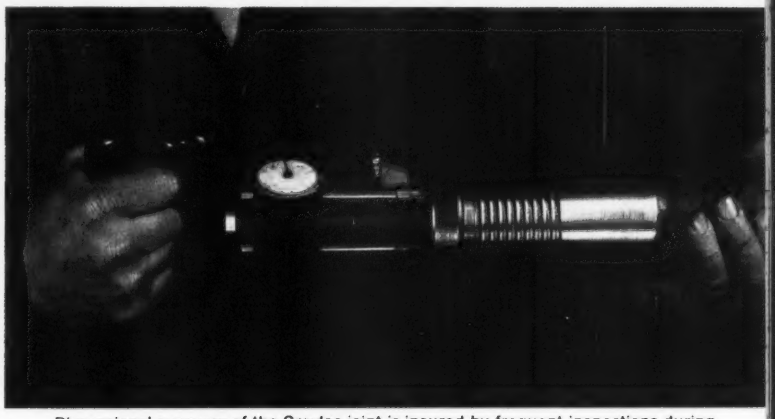
Independent sealing ring in each Grayloc joint provides primary sealing force.



Modified Acme-type threads provide easy stabbing, fast make-up, high resistance to damage.

Grayloc joint is machined on special facilities at J&L's Aliquippa (Pa.) Works.





Dimensional accuracy of the Grayloc joint is insured by frequent inspections during machining operations. It is available in grades J-55, N-80 and P-105.

"We used J&L Grayloc tubing because of limited clearance and high pressures encountered in this dual completion well"

. . . reports Texas driller

Producing a high pressure gas-distillate well with two tubing strings inside a 7-inch casing calls for engineering know-how and a superior tubing product. Bright & Schiff Company of Dallas, Texas, selected J&L Grayloc tubing for the job. Here's why:

Grayloc tubing, except in heavy weights, has smaller joint diameters than conventional external upset tubing. This added clearance makes the Grayloc joint especially suitable for use in multiple completion wells.

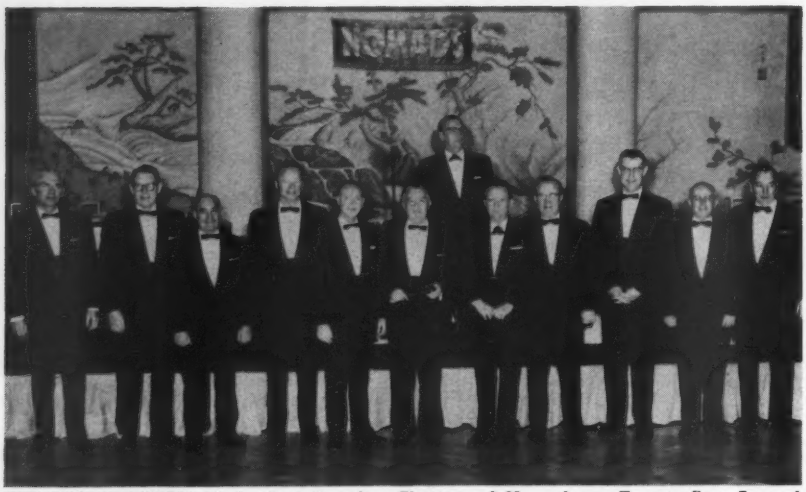
Heavy, square Grayloc threads provide easy stabbing, fast make-up and high resistance to damage. Strength of the Grayloc joint in tension exceeds that of the pipe body itself.

A separate alloy sealing ring provides the primary sealing force. The self-energized ring provides a positive, metal-to-metal seal. Grayloc joints will withstand the highest well pressures yet encountered.

For more information on Grayloc tubing, contact your nearby J&L Supply Division representative. Or write directly to Jones & Laughlin Steel Corporation, 3 Gateway Center, Pittsburgh 30, Pa.

Jones & Laughlin Steel Corporation

PITTSBURGH, PENNSYLVANIA



THE 1960 OFFICERS of the Los Angeles Chapter of Nomads at Twenty-first Annual Inaugural Ball held in the Biltmore Bowl, February 13, 1960 are here shown, with the master of ceremonies, Lee Laird of Ladish Pacific Division, standing in rear. Left to right—B. Bronzan of McCullough Tool Co., deputy sergeant-at-arms; Willard Goertz of Monarch Engineering Corp., assistant treasurer; P. M. Bowen of Martin-Decker Corp., treasurer; Lester G. Evans of Axelson Mfg. Co., secretary; Charles M. King of Baker Oil Tools, Inc., vice president; Tom R. Ashe of Globe Oil Tools Co., regent; Taylor Bannerman of Technical Oil Tool Corp., president; Earl M. Daniels of Hydril Company, regent; Robert P. Gaylord of Wagner-Morehouse, Inc., regent; C. C. Sutton of Oil Well Mfg. Co.; assistant secretary; Jack S. Smith of Byron Jackson Tools, Inc., sergeant-at-arms.

Nomads who had served for two or more terms as regents on the Nomads National Board of Regents were presented with diamond lapel insignia at the Twenty-first Annual Inaugural Ball of the Los Angeles Chapter of Nomads held at the Biltmore Bowl, February 13, 1960. Left to right (front row) W. F. Bettis of Johnston Testers, Inc.; Henry Pullman of Baker Oil Tools, Inc.; Bob Eiche of R. J. Eiche & Associates; Ted Sutter of Baker Oil Tools, Inc.; Robert P. Gaylord of Wagner-Morehouse, Inc. (back row) W. A. Wilson of Web Wilson Oil Tools, Inc.; Earle Boggess of Baker Oil Tools, Inc.; Lee Laird of Ladish Pacific Div.; John Flanagan; Harry Hester of McCullough Tool Company. Not shown are Elmer Decker of Martin-Decker Corp., first regent of the Nomads; Roland E. Smith of Roland E. Smith Co.; J. A. Engstrand.

Rubel Guest Speaker At Long Beach D. & D. Club

A. C. Rubel, president of the Union Oil Company of California, was guest speaker of the Desk and Derrick Club of Long Beach at their March 16th dinner meeting at the La Ronde Rue.

Most appropriately, he chose as his topic, "What Part the Desk and Derrick Clubs Can Play in Oil Industry Public Relations." Speaking to the D&D women was not new to Mr. Rubel as he spoke at their 1959 annual convention and has been guest speaker several times for the Los Angeles Club.

Dockery Guest Speaker At Bakersfield D. & D. Club

"The Phenomena of Flowing Wells' was the title of a talk Bill Dockery of Regan Forge and Engineering Co., chose when he spoke before the Bakersfield Desk and Derrick Club, March 3, at the Caravan Inn.

Following a social hour and dinner meeting, Dockery discussed the nature of flowing wells and the problems attendant with artificial lift upon cessation of natural flow. Colored slides were used to illustrate his talk. He was assisted by Matt Hampton, also with Regan Forge and Engineering Co.

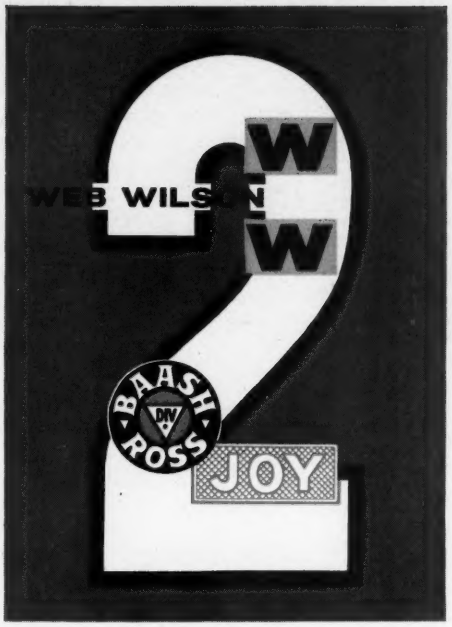
Taylor Bannerman of Technical Oil Tool Corp. (right), incoming president of the Los Angeles Chapter of Nomads, receives the chapter gavel from Tom R. Ashe of Globe Oil Tools Co., retiring president, at the Nomads Inaugural Ball held at the Biltmore Bowl, February 13, 1960.

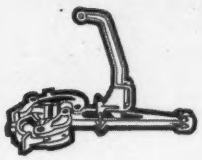
Freedom Foundation Awards For A.P.I. and Sec. Wilson

Separate Freedoms Foundation awards were announced recently for the American Petroleum Institute and its secretary, Willard M. Wilson.

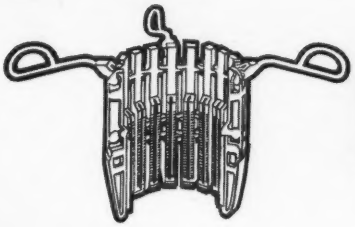
The API was designated to receive the George Washington Honor Medal for helping to create "a better understanding of our great fundamental American traditions in their application to the every-day lives of citizens of our Republic." The award was made on the basis of materials prepared and disseminated by the Institute last year on the occasion of the 100th anniversary of the founding of the U. S. oil industry.

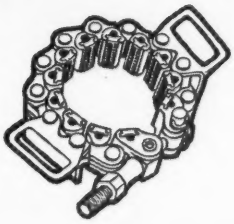
Wilson is to receive the honor medal for an address he delivered last May to the high school graduating class in his native Holdrege, Nebraska. A lawyer by profession, Wilson advised the





Great Lines Become 1 Better





Web Wilson Now A Part of The Baash-Ross Division of Joy Manufacturing Company

Joined with the well known line of Baash-Ross products is the Web Wilson line of hooks, elevators and links, tongs, and other products, for one better line of equipment to serve the drilling industry.

With even better service, quicker delivery, and one manufacturer responsibility, customers using Baash-Ross—Web Wilson products will realize more fully the advantages of this equipment.

Specify with confidence Baash-Ross—Web Wilson Tools . . . your assurance of quality and continuing service.

ENTERING OUR 41ST YEAR OF PROGRESS

BAASH ROSS DIV JOY

EXTENSIVE RENTAL AND SERVICE FACILITIES ARE AVAILABLE IN MOST OIL FIELD AREAS . . . CALL US.

BAASH-ROSS DIVISION
OF JOY MANUFACTURING COMPANY
General Offices: Houston, Texas

graduates that they can help create history by their attitude toward government, freedom and the responsibility of the citizen.

He pointed out that our system of free enterprise should not be expected to survive "if those of us who are the direct beneficiaries are not willing to take a firm public stand in its favor."

Presentation of the awards will be made at a ceremony in New York City this spring at a date to be announced.

Halliburton to Market Products, Tools Outside Petroleum Industry

Halliburton Oil Well Cementing Co. has formed a special products division to market some of its processes, instruments and other developments in areas outside its usual fields of activity.

Heading the new division is Tom E. Morton, who is now surveying the instrument and control needs of the petroleum industry's refining and transportation segments as well as other industries.

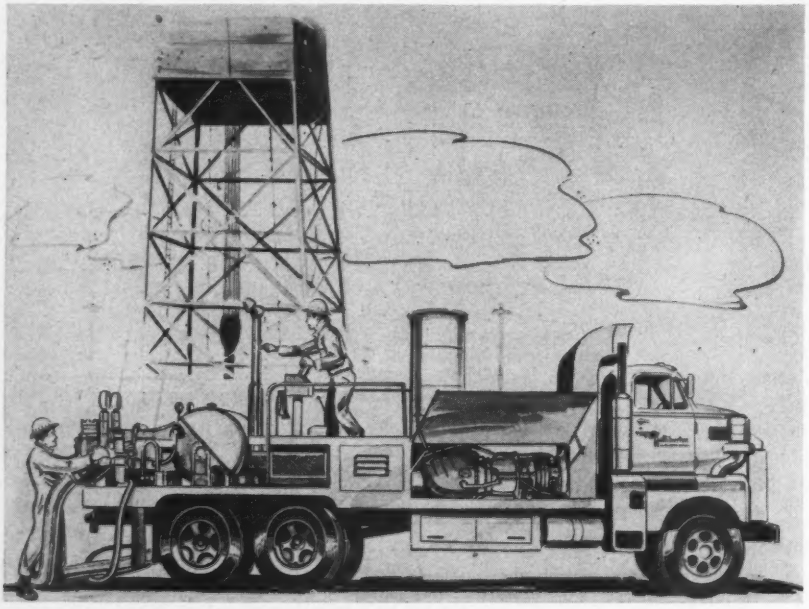
"The special products division does not imply diversification in the usual sense," Halliburton president L. B. Meaders announced. "However, we are looking for new applications for several instruments, tools and processes that were originally developed for use with our basic services."

Tom Morton heads Halliburton Oil Well Cementing Co.'s new special products division formed to market processes, instruments and other developments outside the petroleum industry.

Halliburton executives are optimistic about marketing some of the company's developments in other industries.

"These applications could provide our company with entirely new markets," Meaders said. "If so, the credit will be due to our research program."

Halliburton maintains a 300-person technical research group at its Duncan, Oklahoma, headquarters. Morton's headquarters are also at Duncan.



Halliburton Oil Well Cementing Company of Duncan, Oklahoma, will use General Electric's compact Model 720 as a fracturing unit drive during a one-year field test program starting later this year. This unit, as shown here, gives operators the high power and speed flexibility required for pump operation, while at the same time permitting use of a truck substantially smaller and lighter than is now required for reciprocating engine powered units. Since the 720 requires no warmup period before full power is available, the engine need not be started until it is needed. Also, the engine requires no cooling run so fuel is saved at both ends of the working cycle.

Luncheon Meeting

Dr. Robert E. Stevenson, director of Inshore Research, University of Southern California, addressed the last luncheon meeting of the Pacific Coast Section of the A. A. P. G. The topic for Dr. Stevenson's illustrated talk was "An Oceanographer Looks at Europe."

The luncheon was held Thursday, March 3, 1960, in the Rodger Young Auditorium, Los Angeles, at 12:00 noon.

A. J. "Jack" Mulkey
Waukesha Motors
Pacific Coast Manger

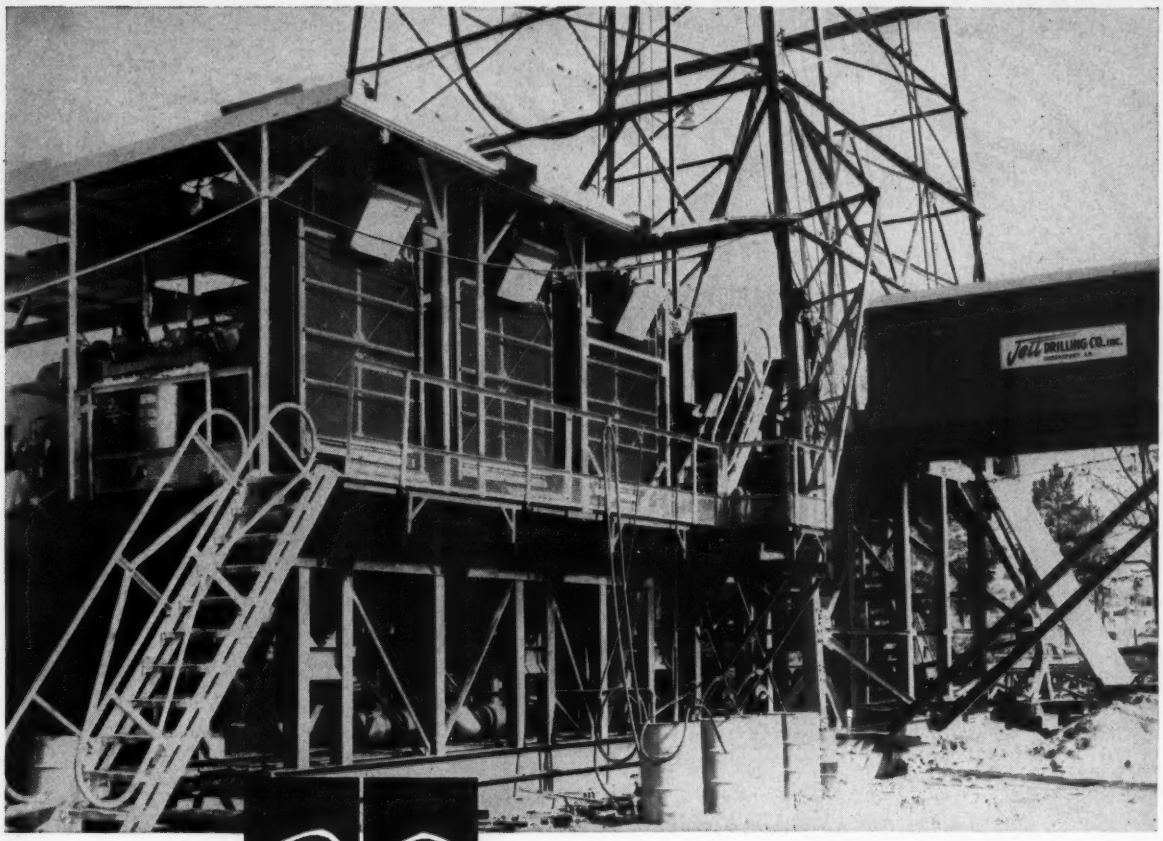
Waukesha Motor's New Headquarters

Waukesha Motor Company President J. E. DeLong has advised that the Company's Los Angeles branch headquarters has been moved into its new building in Huntington Park, California. Effective immediately, the correct address for all correspondence to the Pacific Coast branch will be: Waukesha Motor Company, 5608 Soto Street, Huntington Park, California.

The new telephone number is LUdlow 8-6231 (Huntington Park).

Waukesha will no longer have offices located at the former address in Los Angeles, nor at Watts, California. However, the Watts teletype connection will remain unchanged for approximately a two-month period.

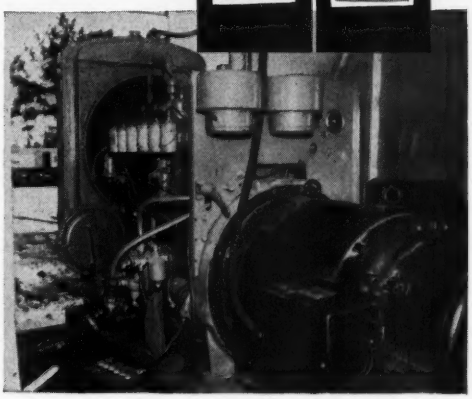
PARTS STOCK will be available at Watts and Watts telephone, LOrain 7-8831, will be effective for approximately two months.



22 WAUKESHAS
POWER 10 DRILLING RIGS

George H. Jett, of the Jett Drilling Co., Inc., Shreveport, La., relies on Waukesha power for his extensive drilling operations in Louisiana, Mississippi, and Alabama, because he's sold on Waukesha's rugged, dependable and economical long life engine operation.

Pictured above is the Jett Rig #114, powered by three Model VLROBU Waukesha Power Units, operating on natural gas. Inset shows a Waukesha "Long Life" Model 145-GZB gas unit, powering a 50 KW generating set, to supply electric power for the rig.



On nine other drilling rigs, Mr. Jett is using ten LRDBC (Diesel); six LRZB (gas); two LRORB (gas); and one NKDBSU (Diesel). With the skid arrangement and the same crankshaft center line heights on the LRDBC, LRZB, and LROR models, the Jett crews can easily change over from gas to Diesel operation in a few hours.

Waukesha can supply your oil field power needs, too.
SEND FOR BULLETINS

464

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Personalities IN THE NEWS

H. L. "Hap" Hanright

H. L. Hanright Transferred To Baker's Los Angeles Office

Baker Oil Tools, Inc. has recently announced the promotion of **H. L. "Hap" Hanright**, formerly Southern Rocky Mountain district manager in Denver, Colorado, to the position of training and sales promotion supervisor in Los Angeles, California.

Hanright went to work for Baker in 1952 as an oil field service engineer in Williston, North Dakota, and in 1954 he became branch manager in that city. In 1955 he was made sub-district manager of the Northern Rocky Mountain District, and then in 1956 he moved to Denver, Colorado as assistant district manager. His promotion to Southern Rocky Mountain district manager came in 1957.

The area formerly managed by Hanright has been consolidated with the Northern Rocky District and placed under the direction of **K. J. Kurtz** with headquarters in Denver, Colorado.

President of Union Oil Co. To Retire April 26

In conformity with the company's long established policy, **A. C. Rubel**, president of Union Oil Company, will retire April 26 upon reaching the age of 65, it was announced Feb. 26, by **Reese H. Taylor** chairman of the board.

Rubel, however, will continue active association with the company he joined 38 years ago by remaining as a director and member of the executive committee. He will also be available for special assignments.

The board of directors contemplates that Taylor will continue as chairman of the board and also serve as president.

Rubel, one of the outstanding figures of the petroleum industry, was recently awarded the famous Anthony Lucas medal by the A. I. M. E. for his contributions to the industry's progress.

Rubel served in the Corps of Engineers, World War I, 1917-19 and won the Distinguished Service Cross.

He joined Union Oil Company of California February 1, 1923, as an exploration geologist at Dominguez after working in Mexico and Central America. He was elected a director in 1938 and president, August 1, 1956.

Rubel is vice chairman of the Military Petroleum Advisory Board, member and former director of the American Institute of Mining and Metallurgical Engineers and past president of the Petroleum Club of Los Angeles.

Shourd Promoted to Sales Manager By Schlumberger

Announcement of reassignment of field personnel has been made by Schlumberger Well Surveying Corporation.

R. R. Shourd, who had served as location manager at Wichita Falls, Texas, has been promoted to Pacific division sales manager.

Elected Senior Board Member

Roy C. Ingersoll, chairman of the board of Borg-Warner Corporation, was elected a senior board member of the National Industrial Conference Board for a term of three years at the board's 401st meeting February 18.

Paul Bartley

B.S.&B. Elects Vice President

Paul Bartley, manager of the Oilfield Equipment Division of Black, Sivalls & Bryson, Inc., has been elected a vice president of the company, according to an announcement by **Kenneth W. Lineberry**, president.

Last year Bartley was promoted to general manager of the company's Oilfield Division after serving six years as vice president and general manager of Black, Sivalls & Bryson, Ltd., the company's wholly-owned Canadian subsidiary where he also was a member of the Board of Directors.

Bartley has steadily advanced in the BS&B organization since joining the company 22 years ago, having served successively as branch manager, assistant regional manager and district sales manager in the Oilfield Division.

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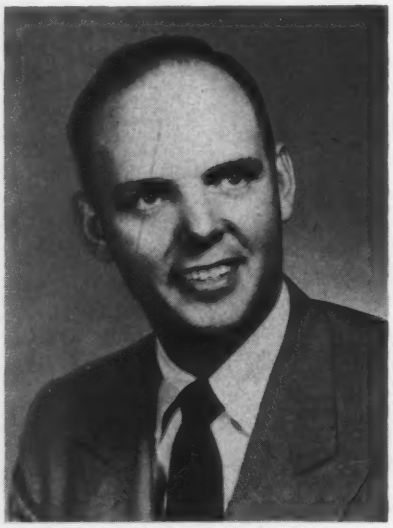
J. E. "Ed" Byers

Byers Promoted to Sales Manager

J. E. "Ed" Byers has been promoted to sales manager of the Oilfield Equipment Division of Black, Sivalls & Bryson, Inc., according to **Paul Bartley**, vice president and division manager.

Before his recent promotion, Byers served as Regional Sales Manager of the division's Gulf and Pacific Region: Prior to that, six years as district sales manager of the Tulsa Oilfield District.

Byers joined BS&B in 1936 and served the company in various sales and engineering capacities before his promotion to sales manager of the Tulsa District.



Edward W. Reif

Tracy E. Smith | A. H. vanderLee | W. A. Law

B. S. & B. Promotes Reif

Edward W. Reif has been promoted to sales manager of the Controls Division of Black, Sivalls & Bryson, Inc., according to **Charles R. Bootz**, division manager.

Since 1952, Reif has served as district sales manager of BS&B's Oilfield Equipment Division's Midland, Texas, district. He has been with the company since 1942, having advanced steadily as salesman, branch manager, assistant regional manager and district sales manager.

R. B. "Cocky" McCannon Now Baker District Manager

Baker Oil Tools, Inc. has announced the promotion of **R. B. "Cocky" McCannon** to the position of Northern California district manager. McCannon brings to this district not only a thorough understanding of Baker products and services but also field experience gained through his nearly thirty years with the company. Except for a few months spent in Venezuela in 1949 as export service engineer, McCannon has served the various California oil fields as a serviceman, a service engineer and for the past several years as a branch manager in Bakersfield.

The Northern California District headquarters has been moved to Bakersfield, and the Taft branch will not be included in this district along with Colusa and Coalinga.

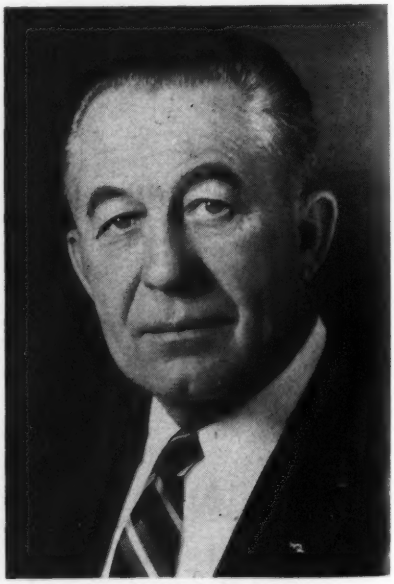
McCannon will assume the responsibilities formerly handled by **Aaron A. Baker** who is retiring from this position to devote his time to his duties as a director of the company and to the job of district sales engineer in Coalinga.

Officers Promoted by National Tank, Ltd.

At the recent annual meeting of the stockholders and board of directors of National Tank Company, Ltd., Calgary, three promotions in the Canadian subsidiary were announced.

Tracy E. Smith was elected president, general manager and a director. **A. H. vanderLee** was elected a vice president, assistant general manager and a director. **W. A. Law** was elected assistant secy.-treas.

It was announced at the same time that a new home office building would be completed and open on February 29. The structure is 80′ x 30′, has a full basement and is completely air-conditioned. It is located at 616 58th Avenue S.E., Calgary.



R. B. "Cocky" McCannon

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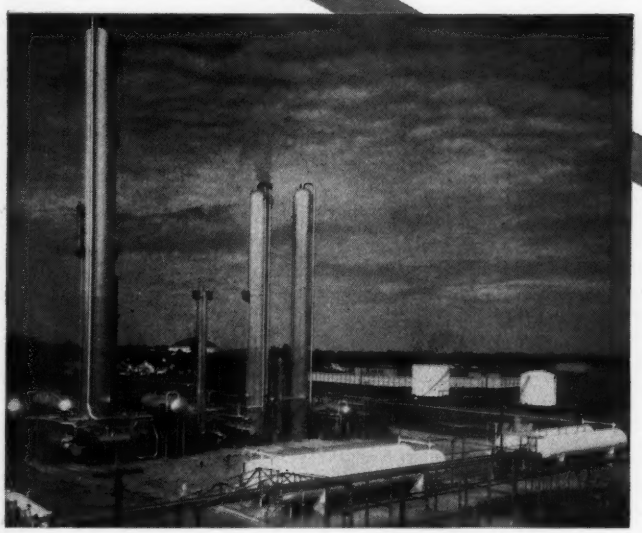

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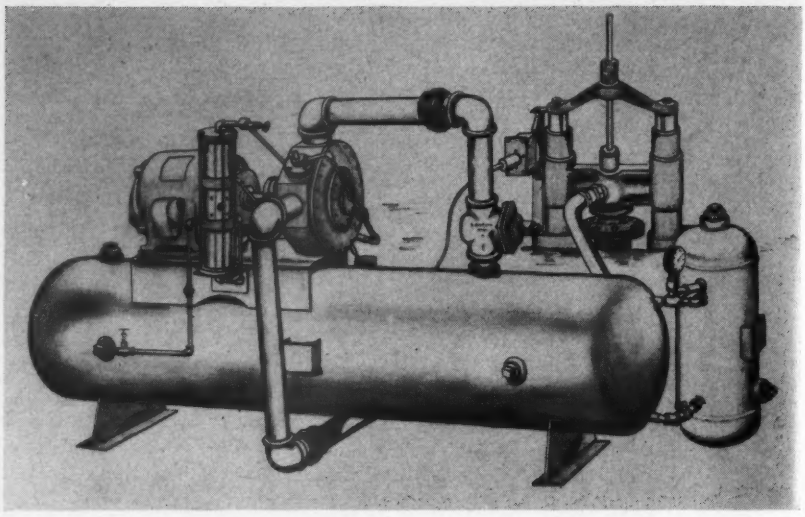
The Fluid Power Pumping Unit provides a completely closed hydraulic circuit, independent of well fluid. Compressed air above hydraulic fluid, in a common accumulator tank, is used to maintain perfect balance of the rod load. The hydraulic rams are mounted below ground level, reducing over-all height and providing quick accessibility to the well for servicing jobs.

The unit features a unique, vane type, reversible hydraulic pump, especially designed to "soften out" the reversing action of the rams. Because of low fluid loss no scavenger system is required. Power fluid, when needed, is lubricated into the system through a small tank connected to the main accumulator.

This equipment is manufactured and distributed by Fluid Power Products, Inc., 2763 Cherry Ave., Long Beach 6, Cal.



Fluid Power's new air balanced hydraulic pumping unit

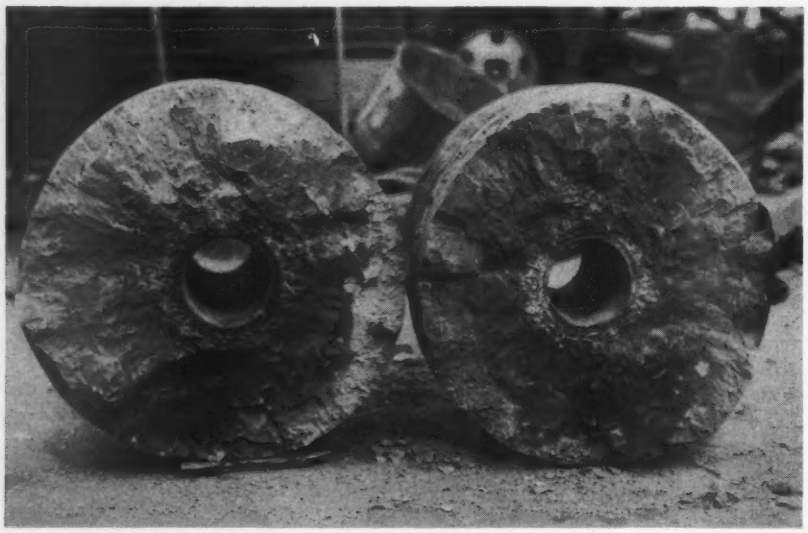
Employs New Frac-Notch Cutter Device

A new tool for use in fracturing oil wells has been developed by McCullough Tool Company. By this new technique the efficiency of conventional hydraulic fracturing has already increased production from treated oil wells up to 30 times.

The newly developed electric wire line tool, the McCullough Frac-Notch Cutter, utilizes a new jet cutting process to form a circular notch horizontally around the entire circumference of the well bore. It cuts through casing, cement, and into the formation as much as 12" deep outside the casing, making a notch approximately 20 to 30 inches in diameter.

The new Frac-Notch device for fracturing an oil producing zone makes it possible to get up to 100 times more effective power as compared to fracture treatment through perforated holes. This may be illustrated as follows: Assume the well has been perforated with ½" holes, 6" deep into the formation. A horizontal plane through the center of one such perforation gives ½" x 6", or a total of 3 square inches through which the fracturing fluid must attempt to pry apart the formation for fluid to pass outwardly through the outer end of such a perforation. Regardless of the number of perforations placed in the zone, the maximum area exposed to the fracturing fluid will be 3 square inches since other perforations above and below any given perforation will be counteracted by the pressures in each adjoining perforation. Therefore the effect of any one perforation is the maximum area that can be effective for any number of perforated holes. Assume that the well is treated with 5,000 psi fracture fluid. 5,000 times 3 square inches is a total of 15,000 lbs. effective for treating the formation through perforated holes.

Now to compare the effect of the McCullough Frac-Notch cutting system with the above: Assume that the well has 5" internal diameter casing which gives 19.6 square inches of internal cross section area. A McCullough Frac-Notch Cutter will easily make a cut into the formation 20" or more in diameter having over 314 square inches area cross section. Again, assume a hydraulic fracturing pressure of 5,000 psi. This pressure times the 314 square inch cross section area gives a total of 1,570,000 lbs., minus 98,000 lbs. for the internal diameter of the casing, leaving a net of 1,472,000 lbs. applied against the upper and lower faces of the cut made by the Frac-Notch Cutter. This is 98 times the force achieved in perforations.



Frac-Notch Cutter surface test. A section of 5½" OD 20 lb. J55 casing was centered in a 55 gallon sealed drum and cemented with neat cement. The Frac-Notch Cutter severed the casing, cement and drum completely into the two pieces shown in the above photograph.

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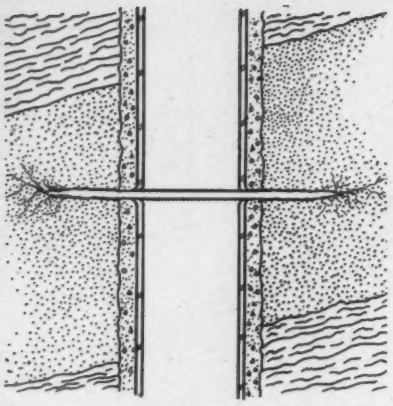

Illustration of wedge shaped cut by McCullough Frac-Notch Cutter. Note that severed ends of casing flare slightly outward presenting a smooth inner casing surface.

This is an extreme amount of lifting power, and this pressure lifts the upper face and compresses the lower face of the notch. The formation is readily fractured at the outer face of the notch —thereby increasing the diameter of the fracture progressively as the formation gives way to the fracturing process. The drop in pressure after the initial breakdown is the proof that fracturing is taking place.

Placement of the notch exactly where the fracture is desired in the formation and concentration of hydraulic fracturing power in the Frac-Notch cut results in greatly increased flow capacity of the fractured oil bearing formation. In wells treated employing the McCullough Frac-Notch Cutter, where 25 bbls. per day was expected, production is over 700 bbls. per day.

The Frac-Notch Cutter is fast and economical. Additional economy is realized because the Frac-Notch Cutter is usually run on the same Service Unit set-up immediately after collar and radioactive logging for correlation and depth control has been made. Not more than two fracture notches are needed in a 10-foot zone.

The Frac-Notch Cutter has been successfully used in many wells in the Rocky Mountain Area. It is particularly useful in sandstone and limestone formations.

Tools are available for 4½", 4¾", 5", 5½", 5¾", 6⅝" and 7" casing. Maximum operating depth is 12,000 feet and maximum operating temperature is 300° F.

Litton Industries Acquires Western Geophysical Company

An agreement has been signed for the exchange of 100% of the outstanding stock of Western Geophysical Company of America for common stock of Litton Industries, it was reported recently by board chairmen Charles B. Thornton of Litton and Henry Salvatori of Western Geophysical. The amount of Litton stock involved was not disclosed.

A privately-held company, Western Geophysical sales totaled $15 million last year. The company employs 900 people located both at the Los Angeles headquarters and laboratory, where electronic instrumentation development and manufacturing are performed, and in field teams on geophysical exploration assignments which have carried Western's services to virtually every free country in the world.

Western Geophysical, as an operating subsidiary of Litton, will continue with all of its present officers, directors, and present organizational structure unchanged, with Dean Walling as president and Henry Salvatori as chairman of the board and chief executive officer, the announcement stated.

"One of the largest companies in the geophysical research field, Western Geophysical has engaged in more offshore exploration than all other companies in the field together," Thornton declared. "The outstanding capacity of Western Geophysical personnel in the development and use of electronic instrumentation makes their addition to the Litton organization a logical and mutually advantageous one," he concluded.

Geophysicist Henry Salvatori, who continues as chief executive officer of the new Litton subsidiary, is a graduate of the University of Pennsylvania in electrical engineering and holds a Master's degree in physics from Columbia University. He was early employed as a research engineer with Bell Telephone Laboratories, subsequently joining Geophysical Research Corporation (an Amerada Petroleum subsidiary), where he played a prominent role in the development of the reflection method of geophysical exploration. In 1933 he founded Western Geophysical which quickly became one of the leaders in its field, a position which it still enjoys today.

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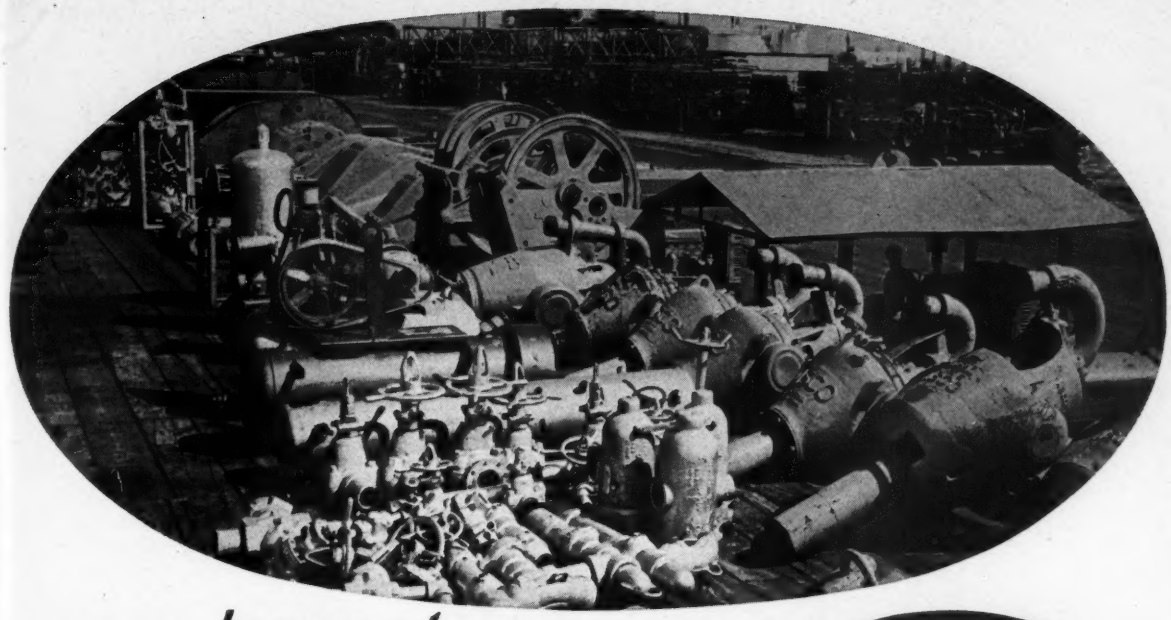

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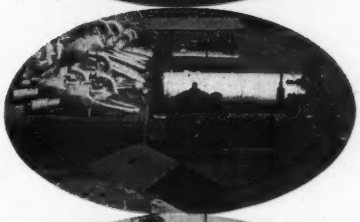

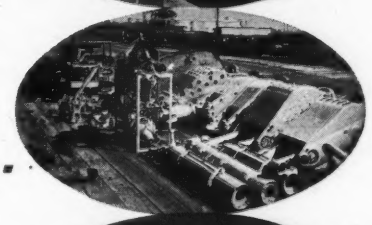

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LOS ANGELES BASIN

Riverside County Test Resumes

After standing idle for some weeks, the Wally W. Taylor, Wm. Taylor and O. B. Pelt's well T. P. Gov't. No. 1 has been taken over by the Trans-Union Oil and Mining Company and will be deepened from the present depth of 1388 feet. Located in the southwest quarter of Section 7-3s-7w, the test will be drilled on down to 2000 feet. The company holds 51 acres under lease in the area and plans to drill five more wells.

Humble Leases East Los Angeles Property

A. J. Industries, Inc. has leased 170 acres of land about seven miles east of downtown Los Angeles, near Rosemead and the San Bernardino Freeway, to Humble Oil & Refining Company for oil and gas exploration purposes. Humble paid a $40,000 bonus for the land, will pay $40,000 annual rental and a 25 per cent royalty on production if oil or gas is found. The land, which is owned by Fletcher Aviation Co., wholly-owned subsidiary of A. J. Industries, is being developed as an industrial park.

Orange County Wildcat Abandoned

Shell Oil Company abandoned its Yorba Linda area wildcat, Olinda Four No. 53-15, at a total depth of 6548 feet and a redrilled depth of 6247 feet. The test was located in the northeast quarter of Section 15-3s-9w, north of Yorba Linda production.

Inglewood Outpost Redrills

Humble Oil and Refining Company's Buckler Community No. 1, located in the southwest quarter of Section 16-2s-14w, has been plugged back to 4000 feet and is cleaning out to redrill a portion of the hole. The well, a southeasterly outpost of the field, was drilled to a total depth of 13,516 feet and cemented 7" casing at 11,521 feet. After several weeks of perforating and testing, the 7" casing was cut and recovered from 4085 feet.

Bandini Test To Redrill

Richfield Oil Corporation is moving in rotary and preparing to redrill Southside-A No. 4 located near the intersection of Astor Ave. and Couts Streets in Section 8-2s-12w. The well was completed in August 1955 from a total depth of 7270 feet and a plugged depth of 5985 feet.

Belmont Offshore Test

Monterey Oil Company is preparing to drill an offshore test, Monterey-Texaco-State No. 29, offshore from Belmont located in projected Section 22-5s-11w.

Sansinena Completion

Union Oil Company completed Sansinena No. 5B-90 pumping 190 b/d of 26.5 gravity oil with a 2.5 per cent cut. Drilled to a total depth of 4730 feet, the hole was plugged back to 4570 feet and has 7" casing with perforations from 4560-3560 feet landed at 4560 feet and cemented through perforations at 3549 feet. Surface location of this directionally drilled hole is in the southeast quarter of Section 30-2s-10w.

Yorba Linda Prospect Test

Shell Oil Company is grading location for Olinda Four No. 0-1 located near the intersection of Citrus and Lakeview Avenues in Section 22-3s-9w. The well will be a temperature control observation test.

Inglewood Test For Monterey

Monterey Oil Company is grading rig site for an outpost test, Valenzuela No. 1, located on lot 5 of Tract 3343 in Section 7-2s-14w.

NORTHERN CALIFORNIA

Two Vernalis Gas Tests

Porter Sesnon et al and Great Basins Petroleum Company have graded locations for two outpost tests and are awaiting contract bids. Sesnon-Vernalis-South Block No. 12-32 will be drilled in the north west quarter of Section 32-3s-7e, two miles south of the Vernalis Gas field, and Sesnon-Vernalis-Unit No. 3 will be drilled in the northwest quarter of Section 14-3s-6e, one-half mile east of production.

Seven miles northeast of the Vernalis Gas field, Christiana Oil Corp. and Great Basins Petroleum Co. abandoned Antonini No. 1 at a total depth of 6360 feet. The test was located in Section 17-2s-7e.

Tehama County Gas Test

Peacock Oil Company is grading location for Pacific Unitarian School No. 1, a 2000 foot test located in the southwest quarter of Section 29-23n-2w. Nearest production to the test is the Rancho Capay one well gas field, 3½ miles to the southeast.

Tehama County Test Abandoned

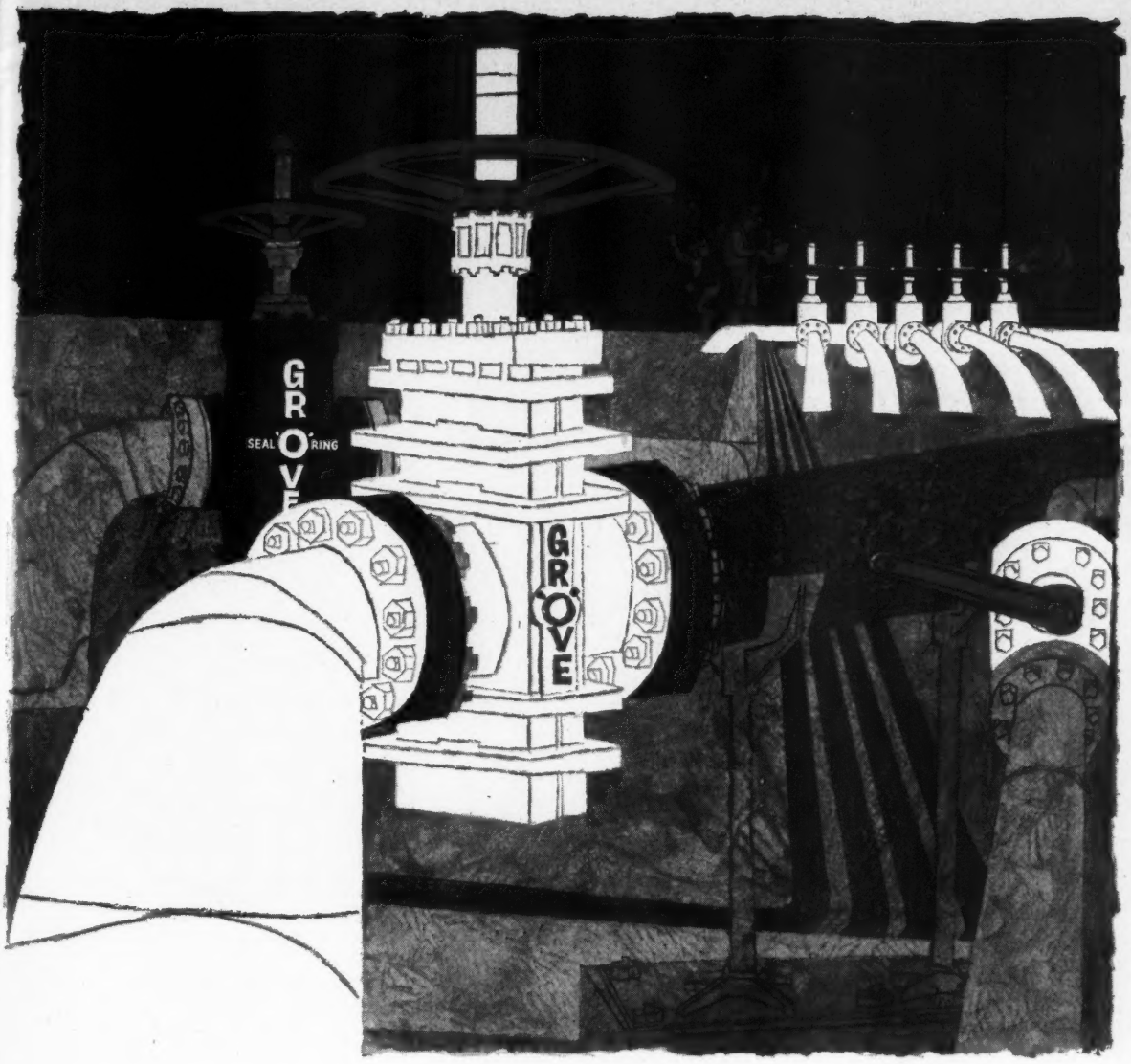
After several weeks of perforating and testing, McCulloch Oil Exploration Company of Calif., Inc. has abandoned McCulloch-Sunray-Stevenson No. 1 located in the northeast quarter of Section 24-26n-5w, nine miles northeast of Red Bluff. The test was drilled to a total depth of 5384 feet and cemented 5½" casing at 3742 feet and 4½" casing at 5055 feet. The Upper Cretaceous F Zone was logged from 1761-1996 feet and the top of the G Zone logged at 1996 feet.

Beehive Bend Outpost Abandoned

E. L. Doheny, Operator, drilled and cored to a total depth of 7032 feet on Section 27 No. 1 and after running sonic and electric logs abandoned the test. The well was located in Section 10-20n-2w north of present gas production.

Butte County Test Abandoned

Three miles north of the Perkins Lake Gas Field, Eddie Fisher abandoned Warren-Collier No. 1 after



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drilling to a total depth of 3800 feet. No tests were made on the well, located in the southeast quarter of Section 27-21n-1w.

Sacramento Outpost Testing

In the Walnut Grove area, Brazos Oil & Gas Company is preparing to production test Adams Unit No. 1, ½ mile northwest of production. Located in the southwest quarter of Section 35-5n-4e, the well was drilled to a total depth of 5650 feet and has 7" casing cemented at 4865 feet.

Glenn County Test Abandoned

Peacock Oil Company drilled to a total depth of 1970 feet on Green-Weldgen No. 2 and after running sonic and electric logs abandoned the well. The test was located in the northwest quarter of Section 23-22n-2w.

Arbuckle Test For Trico

Trico Oil and Gas Company is grading rig site for Freeman No. 1 in the southeast quarter of Section 1-14n-2w. Location for the wildcat gas test is 5½ miles northeast of the Arbuckle Gas field in Colusa County.

Stockton Test For Reserve

Reserve Oil and Gas Company has awarded a contract to Brown Drilling Co. to drill Balma No. 1, a wildcat gas test on Section 64 of the C. M. Webers Grant in Section 32-2n-7e. The well will be drilled to approximately 6000 feet and is northeast of the town of Stockton in San Joaquin County.

Stanislaus County Test Abandoned

Six miles south of the Vernalis field, Kern County Land Company drilled to a total depth of 4403 feet and abandoned KCY-Schmidt No. 1. No tests were made on the well, located in the northwest quarter of Section 26-4s-6e.

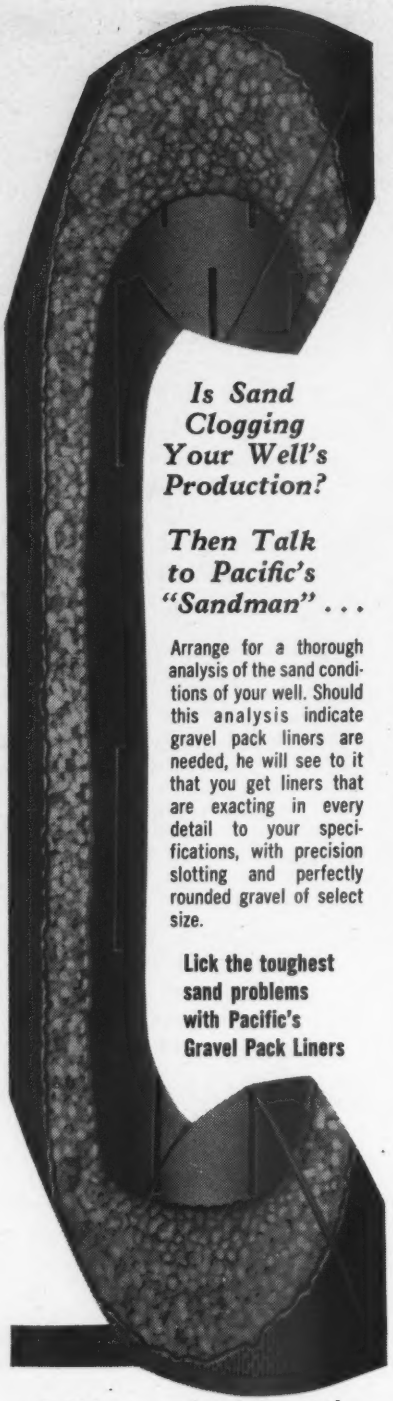
Solano County Gas Test

In the Winters area, Shell Oil Company has graded roads and rig site for Boyce Fee No. 1 located in the northwest quarter of Section 19-8n-1e. Located on the westerly flank of the Winters Gas field, the well will be a 5500 foot test.

COASTAL AREA

Ventura County Wildcat Test

Union Oil Company has commenced drilling on Howarth No. 1 located in the northeast quarter of Section 2-3n-20w, approximately 4000 feet northwest of the Bardsdale field. Bell and Burden, Inc. is drilling this 14,000 foot test.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West Montalvo Completion

Standard Oil Company completed Patterson Ranch One No. 1118 on a gas lift flowing 644 b/d of 18.2 gravity oil cutting 0.5 per cent. Flow was through a 39/64" bean with pressures of 750/1400 psi. Located in the southeast quarter of Section 1-1n-23w, the well was drilled to a total depth of 12,290 feet and cemented 7" casing at 11,567 feet. Cement was cleaned out to 11,454 feet and the casing perforated from 10,565-11,365 feet, at selected intervals.

Santa Barbara County Offshore Test

Offshore from the Naples Townsite, Phillips Petroleum Company is starting Phillips Pet.-Pauley et al-State 2205 E.T. No. 4 located in projected Section 15-4n-30w.

Two Oxnard Completions

Standard Oil Company completed two flowing wells in the Oxnard Field. Daily No. 2 was good for 165 b/d of 38 gravity oil with a 1.7 per cent cut. Flow was through a 14/64" bean with pressures of 2400/2500 psi and gas was gauged at 264 mcf per day. Located in the southwest quarter of Section 12-1n-22w, the well has a total depth of 9608 feet and is plugged inside the 7" casing to 8882 feet. The casing was cemented at 8922 feet and perforated from 8860-8545 feet at various intervals. A. L. Gordon Estate No. 8, located in the southwest quarter of Section 1-1n-22w, was good for 291 b/d of 24.7 gravity oil cutting 0.2 per cent. Total depth of the well is 6340 feet with 7" casing cemented at 6302 feet and a 5½" perforated liner landed at 6340 feet.

South Mountain Completion

In the Bridge Area, Texaco Inc. completed Texas-Union-Norcop No. 2 flowing 580 b/d of 36.2 gravity oil with a cut of 39 per cent. Located in the southeast quarter of Section 15-3n-21w, the well was originally com-

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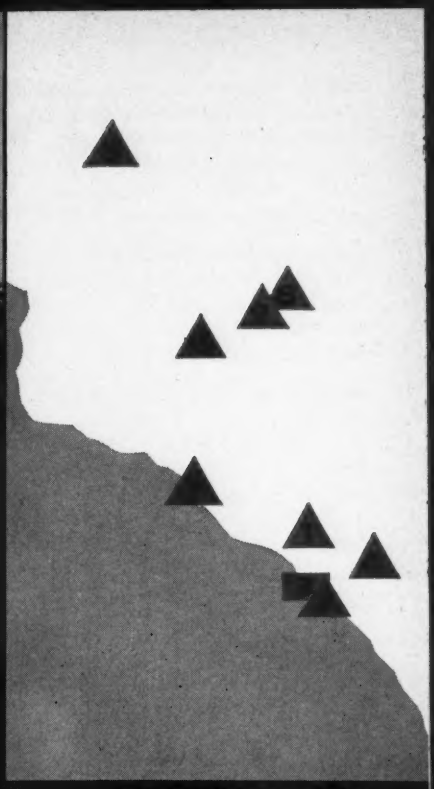
IN CALIFORNIA

VENTURA, CALIFORNIA



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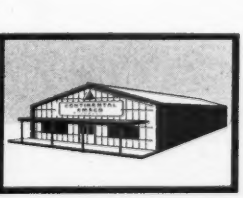

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pleted February 1958 as a dual completion. The well was redrilled and recompleted from the interval 7812-8540 feet. Total depth is 8720 feet with a redrilled depth of 8704 feet and a bottom hole plug at 8560 feet.

Saticoy Test For Shell

Shell Oil Company is grading rig site for S.P.S. No. 39, a proved field well, located on Lot 72 of the Rancho S.P.S. in Section 21-3n-21w.

Offshore Test Suspended

Offshore from Point Conception in Santa Barbara County, Phillips Petroleum Company drilled to 3429 feet and suspended operations on Phillips Pet.-Pauley et al-State 2207 E.T. No. 7. The test is located in projected Section 13-4n-34w.

West Montalvo Completion

Humble Oil & Refining Company completed Montalvo Unit One No. 1 flowing 224 b/d of 15.2 gravity oil from the selectively perforated interval 10,708-11,318 feet. The well is located in the southeast quarter of Section 31-2n-22w and was drilled to a total depth of 11,735 feet. The hole was plugged back to 11,370 feet and has 7" casing cemented at 11,466 feet.

Ventura County Wildcat For Shell

Shell Oil Company is grading location for Sharp No. 1 located near the intersection of Telegraph and Bristol Roads in Section 10-2n-22w. The wildcat test is north of Montalvo production.

SAN JOAQUIN COUNTY

Kings County Test

In the Pyramid Hills area, Drilling and Production Company is drilling and coring below 3739 feet on Orchard No. 64-32. The well is located in the northeast quarter of Section 32-24s-18e, ¼ mile east of Orchard No. 44-32 completed in December 1959 as a new pool discovery flowing 85 b/d of clean oil from the Eocene interval 3752-3625 feet.

Buttonwillow Gas Test

Carr and Wrath are drilling below 2800 feet on Sears-S. P. Unit No. F2-6, a gas test located in the northwest quarter of Section 6-28s-23e on the edge of the Buttonwillow Gas field. The test will be a 3500 foot test of the Lower Arlington.

Welcome Valley Test

Aloha Oil Company (Lee Gibson) has started Welcome No. 2 located in the northeast quarter of Section 2-26s-18e. The area being tested is one mile north of Welcome Valley production.

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Trico Gas Test

In the Trico Gas field, Trico Oil and Gas Company has graded rig site for King-Forbes No. 1, a proved field well, located in the northwest quarter of Section 3-25s-23e.

Four Cymric Field Wells

Standard Oil Company and Victory Oil Company have each staked locations for two fields wells. Standard Oil Co. will drill McPhee No. 8-8A and No. 11-12A, both in the southeast quarter of Section 36-29s-21e. Victory Oil Co.'s two wells, McKittrick Front No. G-10 and No. G-20, are located in the northwest quarter of Section 6-30s-22e.

Buena Vista Hills Tests

Honolulu Oil Corp. is grading rig site for Well No. 505-14D located in the southeast quarter of Section 14-32s-24e. Standard Oil Co. will drill well No. 512-28B in the northwest quarter of Section 28-31s-23e.

Fresno County Wildcat Abandoned

Five miles northwest of the Coalinga field in the Martinez Creek area, Shell Oil Company drilled to a total depth of 8861 feet on S. P. No. 77X-5 and has abandoned the well. An electric log was run and sidewall samples taken but no tests were made. The test was located in the southeast quarter of Section 5-18s-17e.

Deeper Pool Discovery

In the Pleito Ranch area, Shell Oil Company completed KCL No. 48-25 as a deeper pool discovery pumping 243 b/d net oil with a cut of 33.0 per cent. Production is from the perforated interval 12,496-12,520 feet. Located in the southwest quarter of Section 25-11n-21w, the well was first completed in 1957 as a new field discovery from a total depth of 13,804 feet. The well was deepened to its present depth of 15,177 feet and plugged back to 13,990 feet and has 4" casing cemented at 14,747 feet.

Three Monterey County Abandonments

Shell Oil Company has drilled and abandoned three shallow tests in the Northeast San Ardo area. Freeman-Pfyfer No. 76X-23, located in the southeast quarter of Section 23-2 s-

10e, was abandoned at a total depth of 2040 feet. Rosenberg-Bernard No. 64X-33, located in the southeast quarter of Section 33-21s-10e, drilled to a total depth of 1282 feet before abandoning. Brown No. 86X-15, located in the southeast quarter of Section 15-21s-10e, was abandoned at a total depth of 1735 feet.

Trico Gas Field Recompletion

Standard Oil Company recompleted Chilvers Community No. 1 flowing 3000 mcf of gas per day from the perforated interval 2527-2533 feet, through a 32/64" bean with pressures of 500/850 psi. Total depth of the well is 3500 feet with a bottom hole plug at 2537 feet. Located in the northeast quarter of Section 12-24s-22e, the well was originally drilled by the Trico Oil and Gas Company in 1946.

Wheeler Ridge Outpost Completion

Richfield Oil Corp. completed KCL-L No. 85-35 flowing 234 b/d of 20.2 gravity oil with a cut of one per cent. Flow was through a 1" bean from the perforated interval 5678-5525 feet. The well is located two locations west of production in the southeast quarter of Section 35-11n-20w and was drilled to a total depth of 5680 feet. 7" casing is cemented at 5528 feet.

Belgian Anticline Completion

Shell Oil Company completed P.M.L. No. 37-14 flowing 522 b/d oil cutting 1.5 per cent through a 16/64" bean with pressures of 760/140 psi and 287 mcf of gas per day. The well, a northeast extension test of the Main area, was drilled to a total depth of 6495 feet and cemented 5½" casing at 6365 feet. Cement was drilled out to 6300 feet and the casing perforated from 6274-6254 feet. Location of the completion is in the southwest quarter of Section 14-30s-21e. The company has commenced drilling P.M.L. No. 26-14, also located in the southwest quarter of Section 14.

Fresno County Completion

In the Helm-Lanare area, R. B. Montgomery, Operator, completed Rheem-Goodrich No. 31X-25 flowing 150 b/d of 35.0 gravity oil cutting 0.1 per cent through a 6/64" bean. The well is located on the west flank of the Lanare area in the northwest quarter of Section 25-17s-18e approximately 1800 feet from production. Drilled to a total depth of 7200 feet, 5½" casing was cemented at 7198 feet and gun perforated from 6859½-6853½ feet.

Cymric Test Abandoned

Palomar Oil & Refining Corp.'s Palomar-Williams No. 1 located in the northeast quarter of Section 2-30s-21e, drilled to a total depth of 1514 feet and was plugged and abandoned. Base of the Tulare was logged at 1110 feet and top of the Miocene at 1210 feet.

Kern County Outpost Abandoned

In the Wheeler Ridge-Windgap area, Reserve Oil and Gas Company abandoned R-S-T No. 64-30 after reaching a total depth of 11,230 feet. On a test of the JV Sand interval 8780-8830 feet, water was recovered. The test was located one-fourth mile north of production in the northeast quarter of Section 30-11n-19w.

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OTHER AREAS

Alaska

Standard Oil Company and Richfield Oil Corp. drilled to 10,993 feet and cemented 7" casing at 10,992 feet on Soldotna Creek Unit No. 41-4, located in Section 4-7n-9w four miles southerly from the discovery well Swanson River Unit No. 1. Shows of oil and gas were encountered in the well and will be tested after the hole has been drilled ahead to its total depth. No decision has been reached as to the final depth of the well.

On the Kenai Peninsula, Standard Oil Company and Richfield Oil Corp.'s S.R.U. No. 23-22 redrilled to 11,614 feet and has 7" casing standing cemented at 11,593 feet with 1860 sax. Total depth of the hole is 11,773 feet. The well is located in Section 22-8n-9w. S.R.U. No. 14-27, located in Section 27-8n-9w, drilled to 11,329 feet and is conditioning hole.

Arizona

Texas Pacific Coal and Oil Company is grading a location for Navajo No. 2 in the northwest quarter of Section 12-40n-28e and will test the Mississippian. The test is one and one-half miles southeast of the company's discovery well located in the northeast quarter of Section 11-40n-28e, completed in June 1959 pumping 250 b/d oil and 25 b/d water. Production is from the Mississippian perforations 5589-5566 feet.

Colorado

Pure Oil Company completed Severgard No. 1 as a new Weld County discovery pumping 42 b/d oil with a cut of 3 per cent. Located in the southeast quarter of Section 2-7n-58w, two miles northeast of the Grail field, the well was drilled to a total depth of 6361 feet and cemented 5½" casing at 6355 feet. The casing is perforated from 6224-6227 feet opposite the D Sand, topped at 6224 feet.

Nebraska

Wyoming Western Oil Company, McDaniel Drilling Company and S. D. Johnson completed Hoffman No. 1 pumping 600 b/d of clean oil as a new Kimball County discovery. The well is producing from the J Sand topped at 6983 feet.

In Cheyenne County, Exeter Drilling Company and Falcon Seaboard Drilling Company are preparing to complete Schuessler-State No. 1, a wildcat test, after recovering 140 feet of oil and 90 feet of oily mud on a formation test. Located 1½ miles northwest of the Slama Field in the southwest quarter of Section 16-15n-52w, the well was drilled to a total depth of 5455 feet, and logged the top of the J Sand at 5380 feet.

New Mexico

Gulf Oil Company completed Government No. 1 as a Granerous oil discovery from a perforated interval at 6320 feet. Located in the southeast quarter of Section 24-25n-9w in San Juan County, the well was drilled to a total depth of 6652 feet and the bottom plugged back to 6369 feet with 5½" casing cemented at 6610 feet.

Westates Petroleum Completions

Westates Petroleum Company has announced the completion of 2 additional wells in the Langlie-Mattix field of Lea County in southeast New Mexico. "Both wells are dual completions and tend to prove up an area of approximately 240 acres" Westates President H. W. Thompson stated.

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The two new wells in order of completion are the Carlson Federal 25-3 from the Drinkard Fuffelmen zones which flowed at a rate of 6,000 bbls daily and was given an allowable of 135 bbls. per day and the Carlson Federal B 26-5 from the Blinebry-Drinkard zones which flowed at a rate of 440 bbls. a day through a restricted choke and was allowed 96 bbls. a day.

Westates now has three completed wells in this area and a fourth is currently being drilled. In addition, the company has other producing properties in California, Wyoming, Texas, Oklahoma and Canada.

Montana

Sinclair Oil and Gas Company's Rosebud County wildcat test, Kesterson No. 1, on a formation test of the interval 4815-4875 feet flowed 30 barrels of 30.6 gravity oil per hour and 3000 cubic feet of gas per day. Present depth of the hole is 4875 feet and testing will continue. The test is located in the northwest quarter of Section 34-10n-33w four miles west of the Sumatra Field.

Utah

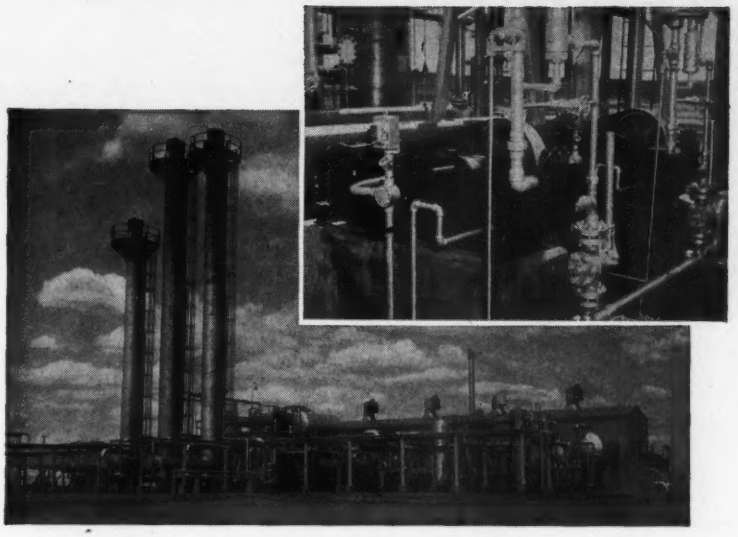
Sunray Mid-Continent Oil Company has staked a location for a second test of the Diamond Ridge Unit in Grand County. The test, Unit No. 3, is located in the southeast quarter of Section 25-17s-22e and will be a 7500 foot Entrada test.

Sinclair Oil and Gas Company is preparing to survey in a location for a San Juan County wildcat test. The location is about 2 miles north of the Boundry Butte Field.

Wyoming

Emmett Schieck and Scimitar Oil Company completed Govt.-Mattoner No. 1 flowing 875 b/d clean oil from the Almond perforations 6781-6801 feet. On a previous test of the Almond perforations 6666-6674 feet, the well flowed 7000 mcf of gas per day rate.

Locations for two new wildcat tests to test the Tensleep and Lance have been staked in the Wind River Basin. True Oil Company is preparing to drill Sun Ranch No. 1, a 7500 foot Basal Lance test, located in the southeast quarter of Section 30-34n-85w in Natrona County. In Fremont County, P. W. Filkey will drill Filkey-Govt. No. 1 in the northwest quarter of Section 13-31n-99w three miles southwest of the Derby Field. The well is scheduled to go to approximately 3400 feet to test the Tensleep Sand.



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The relatives were somewhat ashamed at this and one said, "We would have brought you something but we forgot."

"Yeah, I know," said Grandpa. "I forgot to marry your grandmother, too!"

Shocked, the group said in unison, "You mean that we're . . .?"

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"No!" replied the landlady, slamming the door in his face.

A few minutes later the tramp knocked again. The landlady came to the door again. This time the tramp asked, "Could I have a few words with George?"

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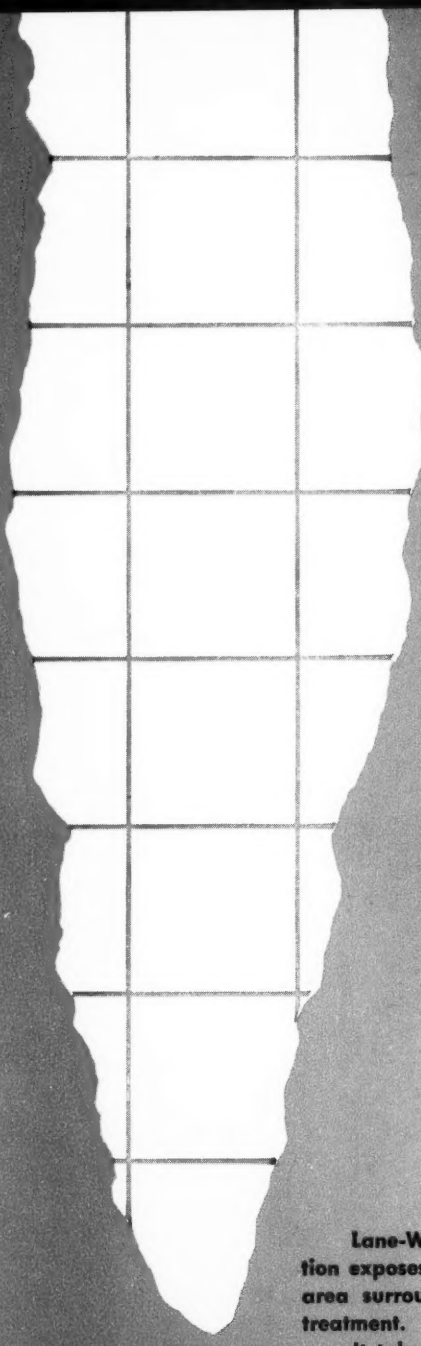

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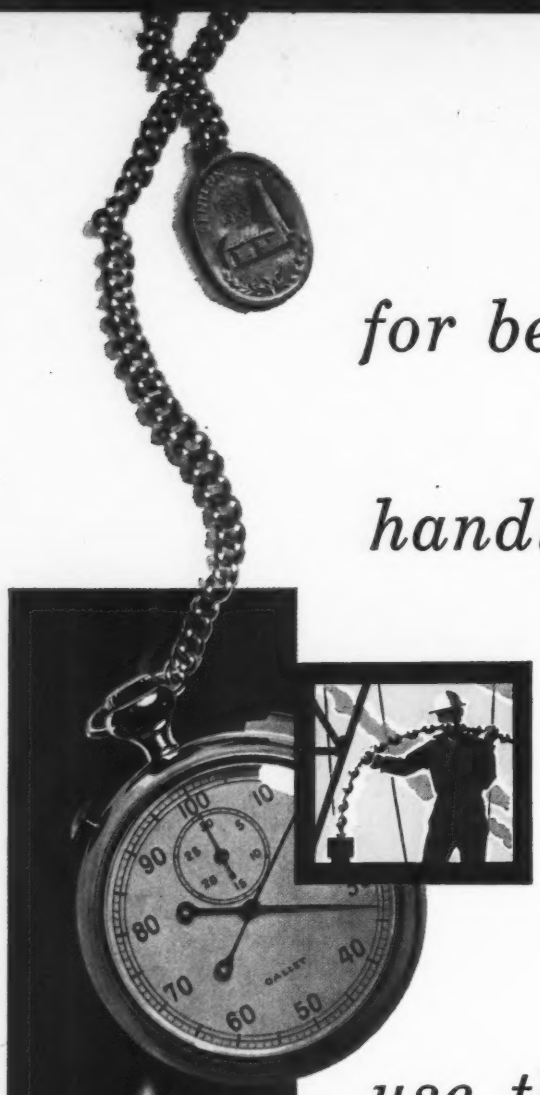

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